INFO

■ Batteries

- Insert so the poles (+ and −) match those in the remote control.
- Do not use rechargeable type batteries.

Do not:

- Mix old and new batteries811.9(.)]TJ/TT1 1 Tff0.6696 -155681 TD0 Tc0 Tw 0
  p

Table of contents

INTRO

Accessories 2
The remote control 2
IMPORTANT SAFETY INSTRUCTIONS 5
Features 5
Control reference guide 6
Remote control and subwoofer 6
Main unit and display 7

Disc information 8
Discs you can use for recording and play 8
Play-only discs 8
***STEP 1* Plug-in Auto Tuning 9**
***STEP 2* VCR Plus+ guide channel settings . . 10**
***STEP 3* Set up to match your television . . . 11**
Television operation 11

RECORDING

Recording television programs 12
Inserting discs 12
Recording modes and approximate recording times in hours 12
Recording the best quality pictures within the set amount of time—Flexible Recording 13
Selecting the audio recording mode 13
Watching the television while recording 13
Specify a time to stop recording 13
Recording from a video cassette recorder 13

Timer recording 14
Using VCR Plus+ codes to make timer recordings . . . 14
Manually programming timer recordings 15
Check programs 16
Change or delete the program 16
Playing while you are recording 17
Playing from the beginning of the program while you are recording—Chasing Play 17
Simultaneous rec and play 17
Reviewing the recorded images while recording—Time Slip 17

PLAYING

Playing discs 18
Operations during play 18
Using the Direct Navigator 19
Changing audio during play 19
Position Memory 19
When a menu appears on the television 19

Starting play from a selected item 19
Selecting an amount of time to skip—Time Slip 20
Quick View 20
Skipping a minute forward—CM Skip 20
Using menus to play MP3 discs 21

ON-SCREEN DISPLAYS

Using on-screen menus 22
Common procedures 22
Disc menu 22
Audio menu 22
Play menu 23
Video menu 23

On-screen displays 24
Changing the information displayed 24
Display examples 24
Using the FUNCTIONS window 25

EDITING

Entering text 26
Creating and playing play lists 27
Creating play list 27
Playing play lists 27
Playing scenes and editing play lists 28
Play Scenes 28
PL Copy 28
PL Erase 28
Enter Title 28
Properties 28
Edit Scenes 29

Editing programs 30
Erase Program 30
Enter Title 30
Properties 30
Protection 30
Shorten Segment 31
Divide Program 31
Disc setting 32
Enter Title 32
Disc Protection 32
Erase all programs 32
Format 33
Finalize 33

RADIO & SOUND

The radio 34
Manual tuning 34
Preset tuning 34
Optional FM antenna connection 35
Sound 36
Dolby Digital and DTS 36
Dolby Pro Logic II 36

Sound Field Control 36
Center Focus 36
Virtual Rear Surround 37
Multi Rear Surround 37
Seat position 37
Adjusting the bass 37
Speaker level adjustments 37

SETTINGS

Changing the unit's settings 38
Summary of settings 38
Common procedures 40
Antenna System and Auto Channel Setting 40

Other channel settings 41
Changing the remote control code 42
Changing the delay time (Speaker) 42
Clock settings 43

INFO

Optional connections 44
Connecting other video equipment 44
Connecting a cable TV box/satellite receiver 44
Receiving digital audio using the optical connection . . 45
Connecting other audio equipment 45
Other antenna connections 46
Other antenna connections to the unit 46
Other antenna connections from the unit to the television . . . 46
Error messages 47
Troubleshooting guide 48

Glossary 51
Specifications 52
Disc handling 53
Maintenance 53
Product Service 53
Limited Warranty (ONLY FOR U.S.A.) 54
Limited Warranty (ONLY FOR CANADA) . . . 55
Index 56

CAUTION!

DO NOT INSTALL OR PLACE THIS UNIT IN A BOOKCASE, BUILT-IN CABINET OR IN ANOTHER CONFINED SPACE. ENSURE THE UNIT IS WELL VENTILATED. TO PREVENT RISK OF ELECTRIC SHOCK OR FIRE HAZARD DUE TO OVERHEATING, ENSURE THAT CURTAINS AND ANY OTHER MATERIALS DO NOT OBSTRUCT THE VENTILATION VENTS.

CAUTION:

TO PREVENT ELECTRIC SHOCK MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

WARNING:

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK OR PRODUCT DAMAGE, DO NOT EXPOSE THIS APPARATUS TO RAIN, MOISTURE, DRIPPING OR SPLASHING AND THAT NO OBJECTS FILLED WITH LIQUIDS, SUCH AS VASES, SHALL BE PLACED ON THE APPARATUS.

CAUTION!

THIS PRODUCT UTILIZES A LASER.
USE OF CONTROLS OR ADJUSTMENTS OR PERFORMANCE OF PROCEDURES OTHER THAN THOSE SPECIFIED HEREIN MAY RESULT IN HAZARDOUS RADIATION EXPOSURE.
DO NOT OPEN COVERS AND DO NOT REPAIR YOURSELF. REFER SERVICING TO QUALIFIED PERSONNEL.

THE FOLLOWING APPLIES ONLY IN THE U.S.A.

Note to CATV system installer:

This reminder is provided to call the CATV system installer's attention to Article 820-40 of the NEC that provides guidelines for proper grounding and, in particular, specifies that the cable ground shall be connected to the grounding system of the building, as close to the point of cable entry as practical.

DANGER	– VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID DIRECT EXPOSURE TO BEAM. (FDA 21 CFR)
CAUTION	– VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE TO BEAM. (IEC60825-1)
ATTENTION	– RAYONNEMENT LASER VISIBLE ET INVISIBLE EN CAS D'OUVERTURE. EXPOSITION DANGEREUSE AU FAISCEAU.
ADVARSEL	– SYNLIG OG USYNLIG LASERSTRÅLING VED ÅBNING. UNDGÅ UDSÆTTELSE FOR STRÅLING.
VARO!	– AVATTAESSA OLET ALTTIINA NÄKYVÄÄ JA NÄKYMÄTÖN LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.
VARNING	– SYNLIG OCH OSYNLIG LASERSTRÅLNING NÄR DENNA DEL ÄR ÖPPNAD. BETRAKTA EJ STRÅLEN.
ADVARSEL	– SYNLIG OG USYNLIG LASERSTRÅLING NÅR DEKSEL ÅPNES. UNNGÅ EKSPONERING FOR STRÅLEN.
VORSICHT	– SICHTBARE UND UNSICHTBARE LASERSTRAHLUNG, WENN ABDECKUNG GEÖFFNET. NICHT DEM STRAHL AUSSETZEN.
注 意	– 打开时有可见及不可见激光辐射。避免激光束照射。
注 意	– ここを開くと可視及び不可視のレーザー光が出ます。ビームを直接見たり、触れたりしないでください。 RQLS0233

(Inside of product)

THE FOLLOWING APPLIES ONLY IN THE U.S.A.

FCC Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

FCC Caution: To assure continued compliance, follow the attached installation instructions and use only shielded interface cables when connecting to peripheral devices.
Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK, DO NOT REMOVE SCREWS. NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.

The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

Before moving the unit, ensure the disc tray is empty.
Failure to do so will risk severely damaging the disc and the unit.

The model number and serial number of this product can be found on either the back or the bottom of the unit.
Please note them in the space provided below and keep for future reference.

MODEL NUMBER SC-HT1000

SERIAL NUMBER _____

User memo:

DATE OF PURCHASE _____
DEALER NAME _____
DEALER ADDRESS _____
_____
TELEPHONE NUMBER _____

Features

This Recordable DVD Home Theater System allows you to enjoy high quality video and audio recordings providing you with a complete home entertainment package.

■ A variety of discs can be played
In addition to DVD-Video movies, this unit can play a variety of discs including multi-channel DVD-Audio, audio CDs, and Video CDs. You can also play MP3 files recorded on CD-R and CD-RW discs.

■ Editing your recording [RAM]
- You can divide programs (➡page 31).
- Use play lists (➡page 27) to select your favorite scenes and rearrange them to play in any order you like.

■ Enjoying television programs in surround sound
- You can enjoy recorded and broadcast television programming in surround sound with Dolby Pro Logic II.
- You can also enjoy satellite television and CATV digital multi-channel audio by connecting with an optical cable.

■ Exceptional sound and picture quality when recording
- Audio is recorded using Dolby Digital stereo, enabling high quality sound recordings. When recording in XP mode it is possible to use LPCM (2 channel) to achieve sound recordings of even higher quality.
- The encoder system used for recording is called “Hybrid VBR” and allows high quality recordings.

■ Fast access to the program you want to watch (➡page 19) [RAM] [DVD-R]
Use the Direct Navigator to find a program you have recorded and start play.

■ Make your own DVD-Video
Finalizing a DVD-R that has been recorded on produces an original DVD-Video in accordance with DVD-Video standards.

■ Maximum 12 hours on DVD-RAM
- Using a double sided, 9.4 GB DVD-RAM allows you to record a maximum of 12 hours (6 hours continuously).
- You can also use the FR (Flexible Recording) mode to fit recordings efficiently onto the available space on the disc.

■ Progressive Scan
By connecting the component video terminal of this unit to a progressive scan television, it is possible to enjoy the high quality picture rendered by the progressive scan function.

■ Quick View (➡page 20) [RAM]
You can speed up play to make checking the contents faster. Both video and sound are played faster.

■ The FUNCTIONS window shows you most of the features you can use (➡page 25)
The FUNCTIONS window has most of the features and functions you are likely to use regularly. Just select the icon for the operation you want to perform.

■ Watch a program while you are recording it (➡page 17) [RAM]
Chasing Play
You can watch a program from the start while you are still recording it.

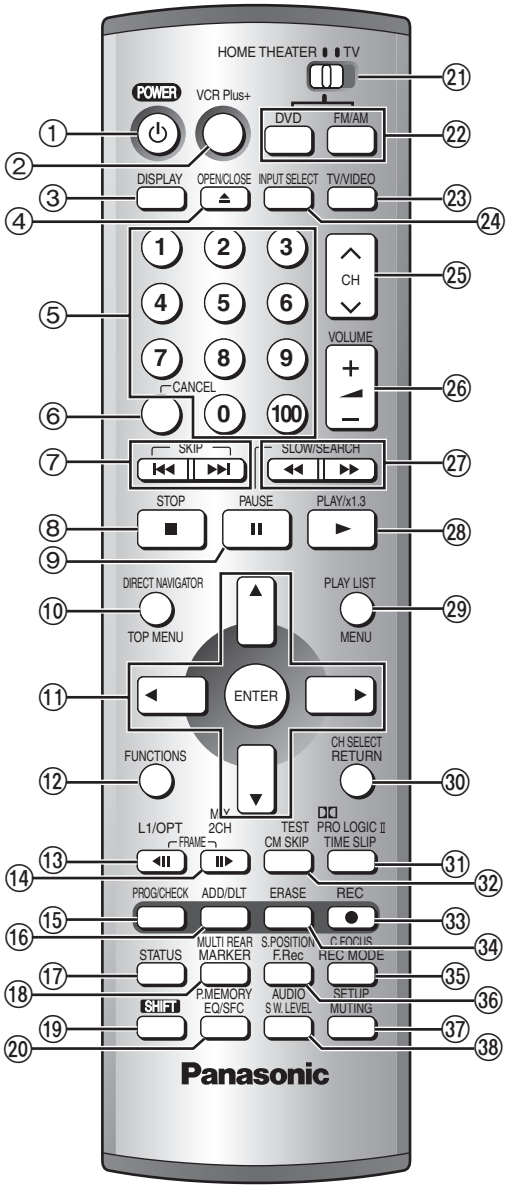
Simultaneous rec and play
You can record a program while watching one you recorded previously.

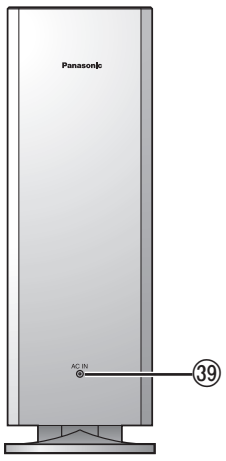
Time Slip
You can jump back to review a piece of action you missed while recording by pressing the time slip button.
- During playback, you can specify a length of time to jump to the scene you wish to view.

The manufacturer accepts no responsibility and offers no compensation for loss of recorded or edited material due to a problem with the unit or recordable media, and accepts no responsibility and offers no compensation for any subsequent damage caused by such loss.
Examples of causes of such losses are
- A disc recorded and edited with this unit is played in a DVD recorder or computer disc drive manufactured by another company.
- A disc used as described above and then played again in this unit.
- A disc recorded and edited with a DVD recorder or computer disc drive manufactured by another company is played in this unit.

Remote control and subwoofer

If [SHIFT] appears after the button name the function will not work unless you use in combination with the [SHIFT] button. Make sure you first press and hold the [SHIFT] button.





POWER button [⏻ POWER] 9
Press to switch the unit from on to standby mode or vice versa. In standby mode, the unit is still consuming a small amount of power.
VCR Plus+ button [VCR Plus+]. 14
On-screen menu button [DISPLAY] 22
Disc tray open/close button [⏏ OPEN/CLOSE] 12
Numbered buttons [1–9, 0, 100]
Cancel button [CANCEL] 10
Skip buttons [⏮, ⏭ SKIP] 18
Stop button [■ STOP] 12
Pause button [❚❚ PAUSE] 12
Direct Navigator, Top menu button [DIRECT NAVIGATOR, TOP MENU] 19, 21
Cursor buttons [▲, ▼, ◄, ►], Enter button [ENTER] 9
Functions button [FUNCTIONS]. 25
Frame reverse button [◄❚❚ FRAME] 18
L1 input analog/optical selector button [L1/OPT] [SHIFT] . . .45
Frame advance button [❚❚► FRAME] 18
Down-mix button [MIX 2CH] [SHIFT] 36
Manual programming and check button [PROG/CHECK] . .15
Manual channel adding and deleting button [ADD/DLT] 9
On-screen display button [STATUS] 24
Marker button [MARKER] 18
Virtual rear/multi rear surround button [MULTI REAR] [SHIFT]. 37
Shift button [SHIFT]
To use the functions labeled in orange, press the button while pressing [SHIFT].
Equalizer/sound field control button [EQ/SFC] 36
Position memory button [P.MEMORY] [SHIFT] 19
Remote control mode selector switch [HOME THEATER, TV]. 11
Switch to “HOME THEATER” when operating the main unit, or switch to “TV” when operating the television.
Main unit selector button
DVD/CD source button [DVD]. 9
Switch the source on the main unit to DVD.
Tuner/band button [FM/AM] 34
Switch the source on the main unit to tuner and change the band.
Television input mode selector [TV/VIDEO] 11
Input select button [INPUT SELECT]. 13
Channel buttons for recorder, tuner, and TV [∧ ∨ CH]. 11, 12, 34
Volume buttons for recorder, tuner, and TV [+ − VOLUME]. 11, 18, 34
Slow/search, Tuning buttons [◄◄, ►► SLOW/SEARCH]. 18, 34
Play/quick view button [► PLAY/×1.3] 18, 20
Play list, Menu button [PLAY LIST, MENU] 19, 27
Return button [RETURN] 10
Speaker channel button [CH SELECT] [SHIFT]. 37
Time slip button [TIME SLIP] 17, 20
Dolby Pro Logic II button [PRO LOGIC II] [SHIFT] 36
One-minute skip button [CM SKIP] 20
Test signal button [TEST] [SHIFT] 37
Recording button [● REC] 12
Program/play list erase button [ERASE] 18
Recording mode button [REC MODE] 12
Center focus button [C.FOCUS] [SHIFT] 36
Flexible Recording button [F.Rec] 13
Seat position button [S.POSITION] [SHIFT]. 37
Muting button [MUTING]
Volume is reduced to minimum.
To cancel, press [MUTING] again or reduce the volume to minimum (−− dB), then raise it to the required level.
Muting is also canceled when you switch the unit to standby.
Setup button [SETUP] [SHIFT] 10
Bass adjust button [S W.LEVEL] 37
Audio, Dynamic range compression button [AUDIO] [SHIFT] 13, 19, 45
AC power supply indicator [AC IN]
This indicator lights when the subwoofer is connected to a household AC outlet.

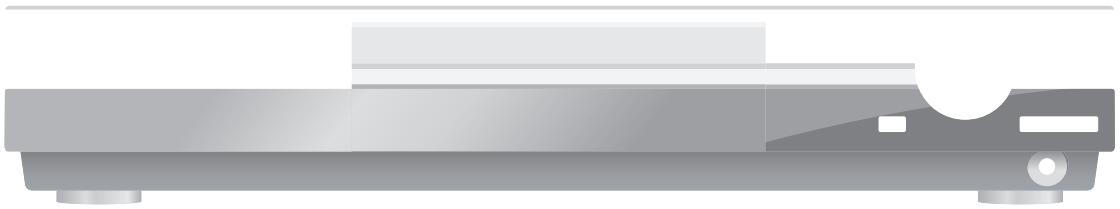
Main unit and display

Controls such as ❶ function the same as the buttons on the remote control.

Remote control signal sensor
Standby/on indicator [⏻/I]
When the unit is connected to the AC power supply, this indicator lights up in standby mode and goes out when the unit is turned on.
Channel buttons for recorder and tuner
[∨, ∧ CHANNEL] 12, 34
Main unit selector buttons and indicators
DVD/CD source button [DVD] 9
Switch the source on the main unit to DVD.
Tuner/band button [FM/AM] 34
Switch the source on the main unit to tuner and change the band.
●The indicator of the currently selected mode lights up.
Disc tray 12
Preset memory button [MEMORY] 34
Radio reception mode button [FM MODE]. 34

Volume dial for recorder and tuner
[VOLUME DOWN, UP] 18, 34
Skip/Slow/Search, Tuning buttons
[I◄◄/◄◄, ►►/►►I, ∨ TUNING ∧] 18, 34
L2 input terminals [L2] 44
Time slip button and indicator [TIME SLIP] 17, 20
Headphone terminal [PHONES]
1 Reduce the volume and connect the headphones (not included).
2 Adjust headphone volume with [VOLUME DOWN, UP].
●Headphone plug type: 3.5 mm (1/8″) stereo
●Audio is automatically switched to stereo (2-channel).

[Note]
Do not play your headphones at a high volume. Hearing experts advise against continuous extended play.



Discs you can use for recording and play

Disc type	Logo	Indication in instr
DVD-RAM ●4.7 GB/9.4 GB, 12 cm (5″) ●2.8 GB, 8 cm (3″)	DVD RAM RAM4.7	[R
DVD-R (for General Ver. 2.0) ●4.7 GB, 12 cm (5″) ●1.4 GB, 8 cm (3″)	D	

●We recommend using Panasonic d
confirmed to be compatible with th
perform correctly.
●Do not allow the disc to become
dirt, dust, scratches or deposits
recording surface may make it
recording.
●Discs with programs recorde
on with this unit.
●This unit is compatible with
Recordable Media (CPR
broadcasts that allow on
onto 4.7 GB/9.4 GB DV
not possible to record

■ DVD-RAM

●**DVD-RAM recorde**
other DVD players
Consult the man
with these DVD-
●This unit is com
DVD-RAM, but
better protecti
●Picture aspe
as they are

■ DVD-R

●**In order**
playbac
●Once a
●You ca
editin
erasi
●Wh
be
a
e
●

zing is
disc or
come
mes.
tive of the video

ue the condition of the

not be recordable on other

nits of your discs in the following ways.

ect tab in the protect
not record to, edit, or erase
(Type 1, 2, and 4 cartridge

-protect (➡page 30)
protect (➡page 32)

ed
or
ng.
cs due to the

D-Video and
s be able to control
ctions. Read the disc's

yed

r other than "1" or "ALL"
DVD-RAM
lowing the Video Recording Standard
R for Authoring
corded on other equipment

D-ROM	●DVD-RW	●+RW
CDV	●CD-G	●Photo CD
●SVCD	●SACD	●MV-Disc

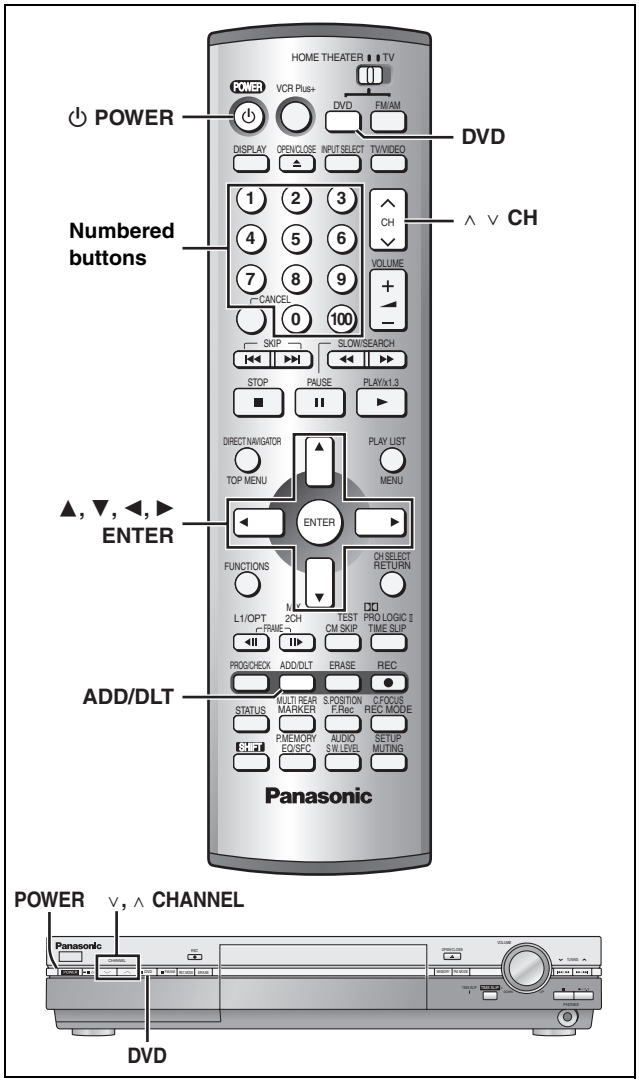
●Divx Video Disc, etc.

sc structure

c structure and the labels given to the items on discs depend on
e disc type.

Track: the smallest division on DVD-Audio, CDs and Video CDs, or a single MP3 file.
Chapter: the smallest division on DVD-Video.
Group: collections of tracks on DVD-Audio and equivalent to folders or albums on data discs.
Title: the largest division on DVD-Video, usually an entire movie.
Program: the division on DVD-RAM equivalent to a single recording.
Play list: a group of scenes on DVD-RAM.
Scene: DVD-RAM program sections specified and grouped into play lists on a DVD video recorder.

STEP 1 Plug-in Auto Tuning



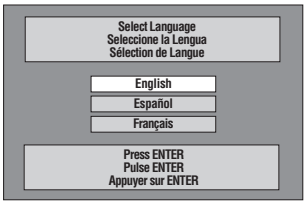
After plugging the unit into your household AC outlet and pressing [⏻ **POWER**] to turn the unit on for the first time, the unit assists you to set the menu language, and automatically tunes in all the channels it can receive and sets the clock.

The unit automatically determines the type of transmission (airwaves or cable) and puts them into channels as follows.

	Band	Channel
TV Mode (Airwaves)	VHF	2–13
	UHF	14–69
CATV Mode (Cable)	VHF	2–13
	CATV LOW BAND	95–99
	CATV MID/SUPER BAND	14–36
	CATV HYPER BAND	37–65
	ULTRA BAND	66–94 100–125
	SPECIAL CATV CHANNEL	1

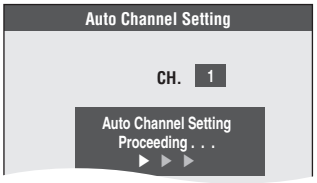
Preparation
- Confirm that the antenna is connected correctly.
- Turn on the television and select the appropriate video input to suit the connections to this unit.
- Press [DVD] to select "DVD/CD" as the source.

1 Press [⏻ POWER] to turn the unit on.



2 Press [▲, ▼] to select the menu language and press [ENTER].

3 Press [ENTER] to start Plug-in Auto Tuning.



The unit then proceeds with Auto Clock Setting. The time is displayed when finished. If the clock is an hour slower or faster than the actual time, go to "Time Zone Adjust" to correct it (➡page 43).

4 When the display shows the correct time

Press [ENTER] to complete Plug-in Auto Tuning.

■ If the unit couldn't set the clock automatically

Press [ENTER] to show the "Manual Clock Setting" screen. Set the time manually (➡page 43).

■ To start Plug-in Auto Tuning again (after relocation, for example)

Antenna system, channel caption, and VCR Plus+ guide channel settings all revert to the default values when you perform the procedure below. Timer recording settings are also cleared.

When the unit is on and stopped

Press and hold [∨ CHANNEL] and [∧ CHANNEL] on the main unit for about five seconds.
The unit turns off.
Press [⏻ POWER] to turn the unit on.
Follow the above steps 2–4.

■ If Plug-in Auto Tuning fails (➡page 40, Antenna System and Auto Channel Setting)

Adding and deleting channels

Add or delete channels if necessary channels are not set or unnecessary channels are set.

While this unit is receiving the antenna signal (but not during recording):

1 Press the numbered buttons to select a channel.

e.g., "5": [0] ➡ [5]
"15": [1] ➡ [5]
"115": [100] ➡ [1] ➡ [5]

- You can also use [∧ ∨ CH] when you are going to delete a channel.

2 Press [ADD/DLT].

The channel is **deleted** if it was set or **added** if it was not set.
e.g.,

Repeat steps 1 and 2 as necessary.

Recording the best quality pictures within the set amount of time—Flexible Recording

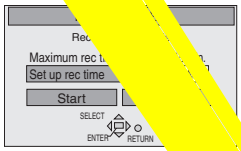
The unit calculates a recording rate that enables the recording to fit the time you set (within the remaining time on the disc) and with the best possible picture quality.

While stopped

Press [F.Rec].

2 Press [◄, ►] to select "Hour" and "Min" and press [▲, ▼] to set the recording time.

You can also set the recording time with the numbered buttons.



3 Press [▲, ▼, ◄, ►] to select "Start" and press [ENTER].

Recording starts.

To show the remaining time
Press [STATUS].

[Note]
It may not be possible to record to the end of the program if the remaining time doesn't allow.

For your reference
- Recording time is reduced if you repeatedly pause recording.
- The recording mode automatically becomes FR mode.

Selecting the audio recording mode

[RAM]

To change the audio recording mode

Press [SHIFT]+[AUDIO].

■ While receiving MTS audio (Multi-channel Television Sound Stereo)

Stereo: Main audio (stereo)
↓
SAP: Secondary audio program (SAP)
↓
Mono: Main audio (monaural)

e.g., "Stereo" is selected

"((" appears when the unit is receiving the audio type you selected.

[Note]
- If you change the sound setting while recording, the recorded sound will also change. [RAM]
- If recorded in SAP mode, main audio is also recorded. [RAM]
- It will not be possible to alter the sound in the following cases:
  –When a DVD-R is in the disc tray.
  –When recording mode is XP and "LPCM" has been selected in the Audio menu, "Audio Mode for XP Recording" (➡page 39).
- When recording MTS sound onto DVD-R or recording using LPCM, only one of either the main channel or the sub channel can be recorded. Select at "Select MTS" (➡page 39).
- If the broadcast is "Mono+SAP", audio will be monaural even if you select Stereo mode.
- Select "Mono" if reception is poor during a stereo broadcast.

Watching the television while recording

Pictures being recorded are unaffected.

Switch [HOME THEATER, TV] to "TV".
Press [TV/VIDEO] to change the television's input mode to "TV".
Press [∧ ∨ CH] to change channels.
You can also select the channel with the numbered buttons.

Specify a time to stop recording

This is a simple way of specifying a time to stop recording when you are in a hurry or before you go to bed.

During recording

Press [● REC] to select the recording time.

Each time you press the button:
0:30 ⟶ 1:00 ⟶ 1:30 ⟶ 2:00 ⟶ 3:00 ⟶ 4:00
↑——— Counter (cancel) ←———┘

e.g.,

To show the remaining time
Press [STATUS].

For your reference
- This does not work during timer recordings (➡page 14) or while using Flexible Recording (➡left).
- Recording stops and the set time is cleared if you press [■].
- The set time is cleared if you change the recording mode or channel while recording is paused.

Recording from a video cassette recorder

Preparation
Connect a video cassette recorder to this unit's input terminals (➡page 44).

1 While stopped

Press [INPUT SELECT] to select the input channel for the equipment you have connected.

Select L1, L2 or L3.
- You can also select the input channel by pressing [∧ ∨ CH].

2 Press [REC MODE] to select the recording mode (XP, SP, LP or EP).

3 Start play on the other equipment.

4 Press [● REC] at the point you want to start recording.

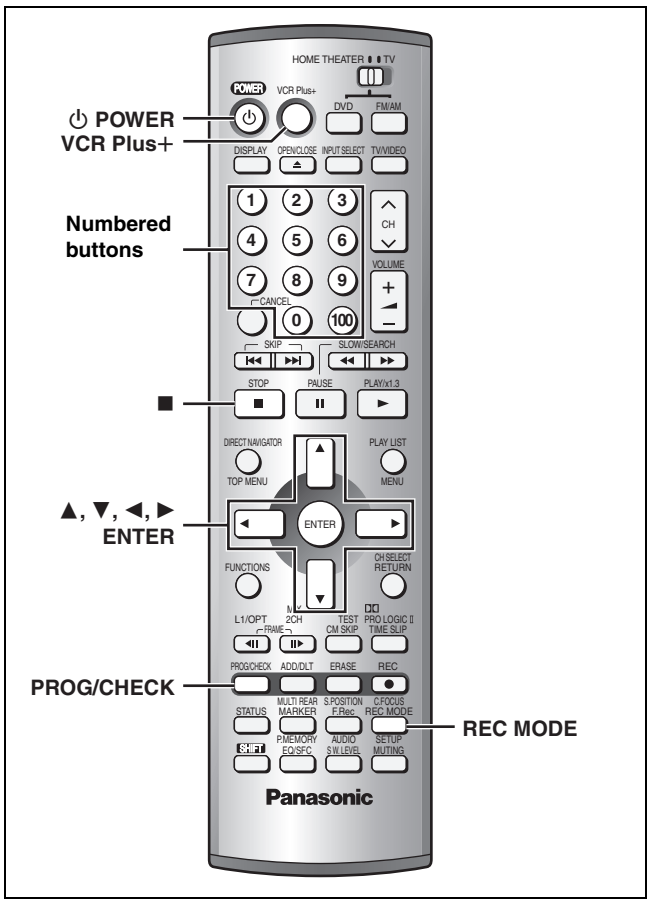
Recording starts.

To skip unwanted parts
Press [❚❚] to pause recording. (Press again to restart recording.)

To stop recording
Press [■].

[Note]
- When recording using L1, L2 or L3 terminals, only the sound received at the time of recording will be recorded.
- If Flexible Recording (➡left) is used instead of steps 2 and 4, settings can be made so that recording continues to the end of the video.

Almost all videos and DVD software on sale have been treated to prevent illegal copying. Any software that has been so treated cannot be recorded using this unit.



[RAM] [DVD-R]
You can enter up to 16 programs up to a month in advance.
(Each daily or weekly program is counted as one program.)

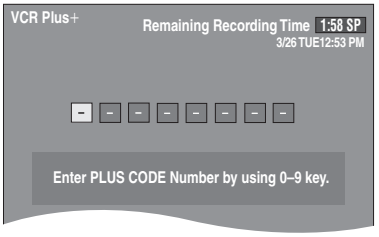
Preparation

- Set the clock and guide channels for VCR Plus+ recording (➡page 10) correctly.
- Release protection before proceeding. [RAM] (Cartridge ➡page 8, disc ➡page 32)

Using VCR Plus+ codes to make timer recordings

Entering VCR Plus+ codes is an easy way of programming the unit for recording. You can find these codes in newspapers and magazines.

1 Press [VCR Plus+].

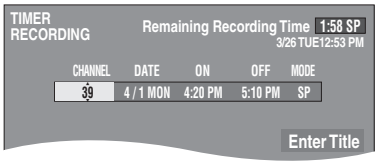


2 Press the numbered buttons to enter the VCR Plus+ code.

Press [◄] to move back to correct a digit.

3 Press [ENTER].

Confirm the program and make corrections if necessary using [▲, ▼, ◄, ►].


TIMER RECORDING
Remaining Recording Time 1:58 SP
3/26 TUE12:53 PM
CHANNEL DATE ON OFF MODE
39 4 / 1 MON 4:20 PM 5:10 PM SP
Enter Title

- "Invalid Entry" is displayed when you enter the wrong code. Reenter the code.
- **To change the recording mode**
  Press [REC MODE].
- **To enter the title of the program**
  Press [◄, ►] to select "Enter Title" and press [ENTER] (➡page 26).

4 Press [ENTER].

The program timer recording settings are stored.

TIMER RECORDING
Remaining Recording Time 1:58 SP
3/26 TUE12:53 PM
No CHANNEL DATE ON OFF MODE PURGE
01 39 4 / 1 MON 4:20 PM 5:10 PM SP Enable
New Timer Program

Displayed if the recording can fit in the remaining space on the disc.

Repeat steps 1–4 to program other recordings.

5 Press [PROG/CHECK].

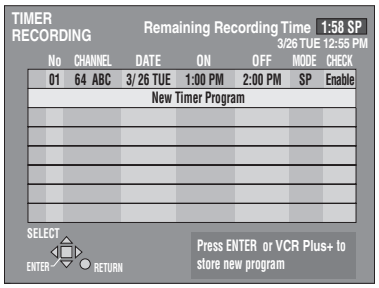
The message "TURN RECORDER OFF FOR TIMER RECORDING." is shown on the television.

6 Press [⏻ POWER].

The "⏲" lights on the unit's display to indicate timer recording standby has been activated.

Manually programming timer recordings

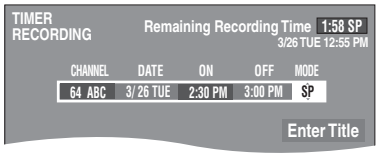
1 Press [PROG/CHECK].


TIMER RECORDING
Remaining Recording Time 1:58 SP
3/26 TUE 12:55 PM
No CHANNEL DATE ON OFF MODE CHECK
01 64 ABC 3/ 26 TUE 1:00 PM 2:00 PM SP Enable
New Timer Program
SELECT
ENTER
RETURN
Press ENTER or VCR Plus+ to store new program

2 Press [▲, ▼] to select "New Timer Program" and press [ENTER].

3 Press [►] to move through the items and change the items with [▲, ▼].

- The current settings are shown each time you press [►].
- You may use the numbered buttons to enter the CHANNEL, DATE, ON (Start Time), and OFF (Finish Time).

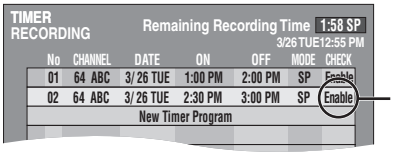

TIMER RECORDING
Remaining Recording Time 1:58 SP
3/26 TUE 12:55 PM
CHANNEL DATE ON OFF MODE
64 ABC 3/ 26 TUE 2:30 PM 3:00 PM SP
Enter Title

- **CHANNEL (Channel number and caption)**
- **DATE**

→ Current date
↓ ↑
Next day up to one month later minus one day
↓ ↑
Weekly timer: SUN-SAT→MON-SAT→MON-FRI
↓ ↑
→ Daily timer: WEEKLY SUN→---→WEEKLY SAT

- **ON (Start time)/OFF (Finish time)**
  The time increases or decreases in 30-minute increments if you hold the button.
- **MODE (Recording mode ➡page 12)**
  SP←→XP←→FR←→EP←→LP
  ↑————————————————↑
- **Enter Title**
  Select "Enter Title" using [◄, ►] and press [ENTER] (➡page 26).

4 Press [ENTER] when you have finished programming the timer.


TIMER RECORDING
Remaining Recording Time 1:58 SP
3/26 TUE12:55 PM
No CHANNEL DATE ON OFF MODE CHECK
01 64 ABC 3/ 26 TUE 1:00 PM 2:00 PM SP Enable
02 64 ABC 3/ 26 TUE 2:30 PM 3:00 PM SP Enable
New Timer Program

Displayed if the recording can fit in the remaining space on the disc.

Press [▲, ▼] to select "New Timer Program" and repeat steps 3–4 to program other recordings.

5 Press [PROG/CHECK].

The timer recording list disappears and the message "TURN RECORDER OFF FOR TIMER RECORDING" is shown on the television.

6 Press [⏻ POWER].

The "🕘" lights on the unit's display to indicate timer recording standby has been activated.

■ To release the unit from recording standby

If you want to record something else before the program start time, for example:

Press [⏻ POWER].

The unit turns on and "🕘" goes out.

- Be sure to press [⏻ POWER] to return the unit to standby mode before the scheduled recording time. Timer recording will work only if "🕘" is displayed.

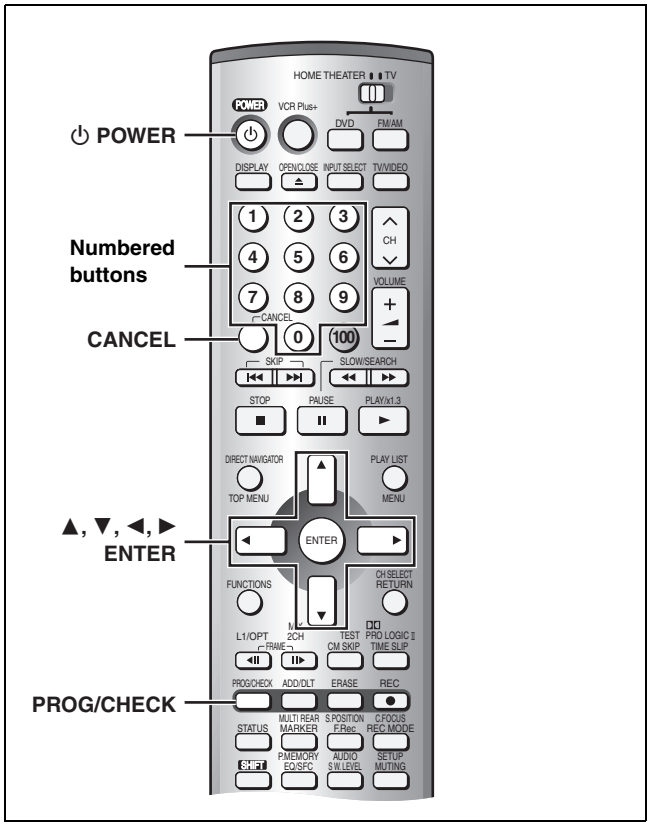
■ To cancel recording when recording has already begun

Press [■], then [ENTER] within 5 seconds.

Recording stops.

[Note]

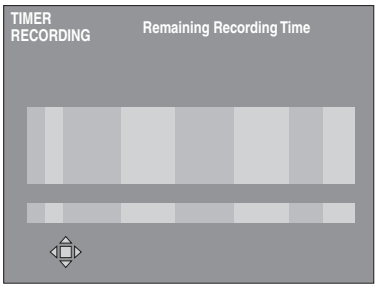
- "🕘" flashes when the unit couldn't go to timer recording standby (e.g., a disc isn't loaded, a disc that can't be recorded to is loaded, or the disc is protected). Check the disc carefully.
- The actual time recorded may be longer than the program itself when television programs are recorded using VCR Plus+.
- If you don't select a recording mode when using VCR Plus+ codes to make a timer recording, the unit sets the mode selected on the unit at that time (unless the mode is "XP", in which case the unit sets "FR" as the mode).
- "All timer programs are occupied." appears if there are already 16 programs.
- The remaining time displayed is based on the current recording mode.
- When you program successive timer recordings to start immediately one after the other, the unit cannot record the part at the beginning of the later programs (a few seconds when recording with DVD-RAM and approximately 30 seconds when recording with DVD-R).
- If you set DST (Daylight Saving Time) to ON when manually setting the clock (➡page 43), timer recording may not work when summer switches to winter and vice versa.



[RAM] [DVD-R]

Check programs

1 Press [PROG/CHECK].



Icon explanations

Ⓦ The times overlap those in another program.
- ●Note the following if times overlap:
  - –The program with the earlier start time receives priority.
  - –Recording of the program with the later start time starts when the earlier program finishes recording.
  - –If you make two programs with the same start time, the one you programmed last receives priority.

⊖ You stopped recording of a weekly or daily timer recording. The icon disappears the next time the timer starts recording.

● This program is currently recording.

Ⓕ The disc was full or the maximum number of programs or scenes was reached so the program failed to record.

The material was copy-prohibited so it was not recorded.

Ⓧ The program did not complete recording because the disc is dirty or some other reason.

●Programs that failed to record are displayed gray. They are automatically deleted from the timer recording list at 4 a.m. two days later.

Message displayed in the CHECK line

2 Press [PROG/CHECK].

The timer recording list disappears.

1 Press [PROG/CHECK].

The timer recording list appears.

2 Press [▲, ▼] to select the program.

●You may also select programs with the numbered buttons.
e.g., “5”: [0] ➡ [5]
“15”: [1] ➡ [5]

●Press [◄, ►] to skip down several programs on the list.

3 Press [CANCEL] to delete,

You cannot delete programs that are currently recording.

or press [ENTER] to change.

The timer recording setting screen appears.

4 If you pressed [ENTER] in step 3,

Move through the items with [◄, ►] and change the settings with [▲, ▼] and press [ENTER].

5 Press [PROG/CHECK].

The timer recording setting screen disappears.

To put the unit on timer recording standby

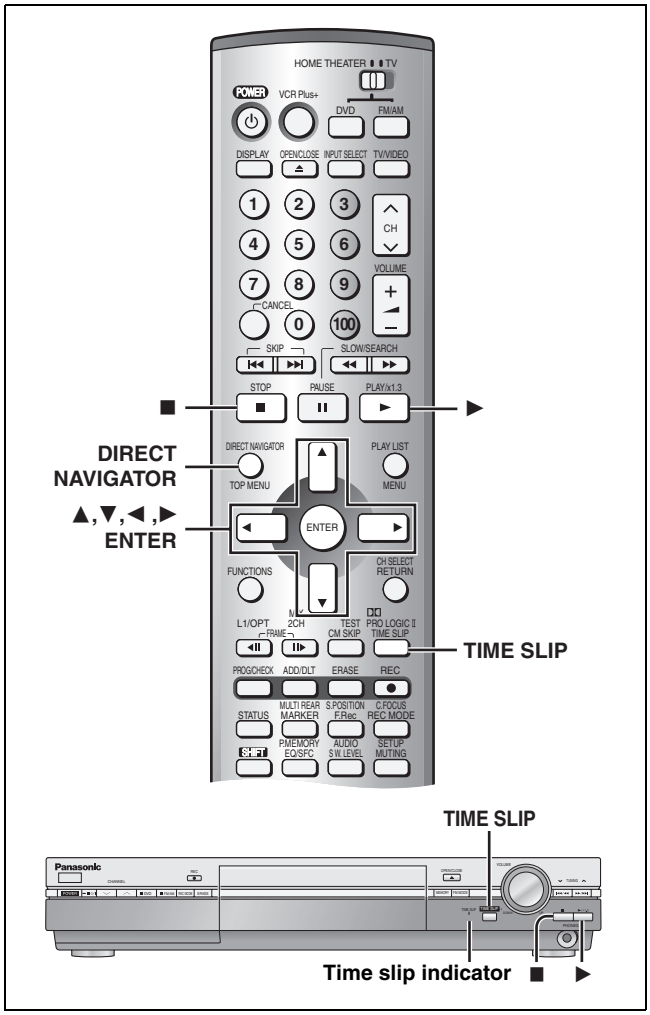
Press [⏻ POWER].

The unit turns off and “⏲” lights on the unit’s display.

[Note]

●During timer recording, you can change the end time as long as the recording mode is not “FR”.

●Even when the power is off, you can display the timer recording list by pressing [PROG/CHECK].



[RAM]

Playing from the beginning of the program while you are recording—Chasing Play

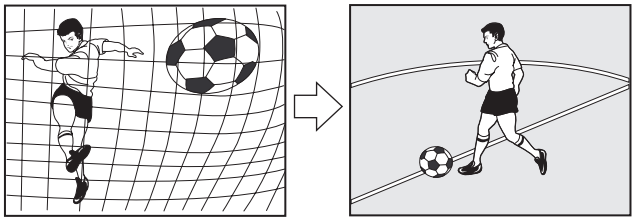
Press [►] (PLAY).

Time slip indicator on the main unit lights.
Play starts from the beginning of the program being recorded.

e.g.,

You are recording a sports program and you want to watch it from the beginning.

The same sports program is played back from the beginning. (Recording continues.)



[Note]
Sound is not output while fast-forwarding.

Simultaneous rec and play

While recording, you can play a program previously recorded.

1 **During recording**

Press [DIRECT NAVIGATOR].

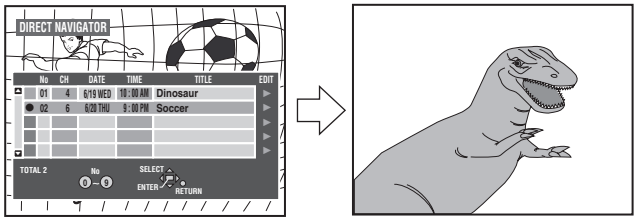
Time slip indicator on the main unit lights.

2 Press [▲, ▼] to select a program and press [ENTER].

e.g.,

You want to watch the movie you recorded yesterday while recording a sports program.

The movie is played back while the sports program is being recorded.



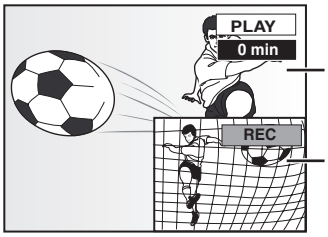
[Note]
- Sound is not output while fast-forwarding.
- You cannot edit programs during simultaneous rec and play (➡page 30).

Reviewing the recorded images while recording—Time Slip

While recording, you can specify the desired scene of the recorded program or program being recorded using the time setting and watch both in two on-screen windows.

1 Press [TIME SLIP].

Time slip indicator on the main unit lights.

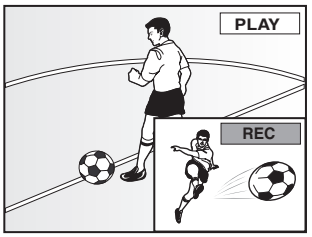


Play starts from 30 seconds previous.

The current recording images appear as a picture-in-picture.

- You will hear the playback audio.
- Press [DIRECT NAVIGATOR] to select another program.

2 Press [▲, ▼] to enter the time and press [ENTER].



Press [▲, ▼] to alter in one-minute units. Press and hold [▲, ▼] to alter in 10-minute units.

Press [TIME SLIP] to show the play images in full. Press again to show the play and recording images.

■ To stop play and recording

1 Press [■]. (Play stops.)
Wait 2 seconds.
2 Press [■]. (Recording stops.)
- To stop timer recording, press [■], then [ENTER] within 5 seconds.

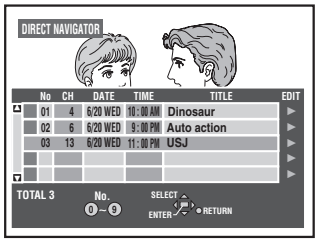
Using the Direct Navigator

[RAM] [DVD-R]

A list of programs is created as you record them. You can use this list to find programs to watch.

1 Press [DIRECT NAVIGATOR].

The highlighted program plays in the background.



2 Press [▲, ▼] to select the program and press [ENTER].

You can also select programs with the numbered buttons.

e.g., "5": [0] ➡ [5]
"15": [1] ➡ [5]

To clear the program list

Press [DIRECT NAVIGATOR].

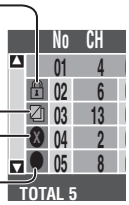
About the program list

Program protected

Copy-protected
Copy-protected program from CATV broadcasts, for example.

Unable to play

Currently recording



Changing audio during play

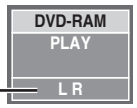
[RAM] [DVD-A] [DVD-V] [VCD]

To change the audio

Press [SHIFT]+[AUDIO].

■ While playing DVD-RAM or Video CD

LR→L→R



e.g., [RAM] "L R" is selected

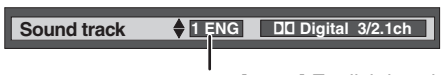
- When playing a SAP broadcast recorded DVD-RAM: MAIN⟷SAP

For your reference

You can change the audio for the full images being played with simultaneous rec and play and Time Slip. [RAM]

■ While playing DVD-Audio or DVD-Video

You can change the audio channel number each time you press the buttons. This allows you to change things like the soundtrack language.



e.g., [DVD-V] English is selected.

Position Memory

(Effective only when the elapsed play time is displayed)

You can start play from a memorized position even after turning the unit off.

1 During play

Press [SHIFT]+[P.MEMORY].

The message "Position Memorized" appears on the television.

2 After switching the unit to standby and back on

Press [►] (PLAY).

Play starts from the memorized position. (The position is cleared.)

[Note]

[RAM]

- Positions remain memorized even after the disc tray is opened.
- You cannot mark positions if the disc is write-protected.

[DVD-R] [DVD-A] [DVD-V] [VCD] CD MP3

- The position is cleared when you open the disc tray.

When a menu appears on the television

[DVD-A] [DVD-V] [VCD]

Press [▲, ▼, ◄, ►] to select an item and [ENTER] to confirm.
Or, press the numbered buttons.

e.g., "5": [0] ➡ [5]
"15": [1] ➡ [5]

Press [TOP MENU] to show the top menu.
Press [MENU] to show a menu.
Press [RETURN] to show a menu. [VCD]

[Note]

- Discs continue to rotate while menus are displayed. Press [■] when you have finished viewing to preserve the unit's motor and your television screen.
- **If "⃠" appears on the television,** the operation is prohibited by the unit or disc.
- Functions available vary from disc to disc.

Starting play from a selected item

Press the numbered buttons.

e.g., "5": [0] ➡ [5]
"15": [1] ➡ [5]

MP3 "5": [0] ➡ [0] ➡ [5]
"15": [0] ➡ [1] ➡ [5]

[Note]

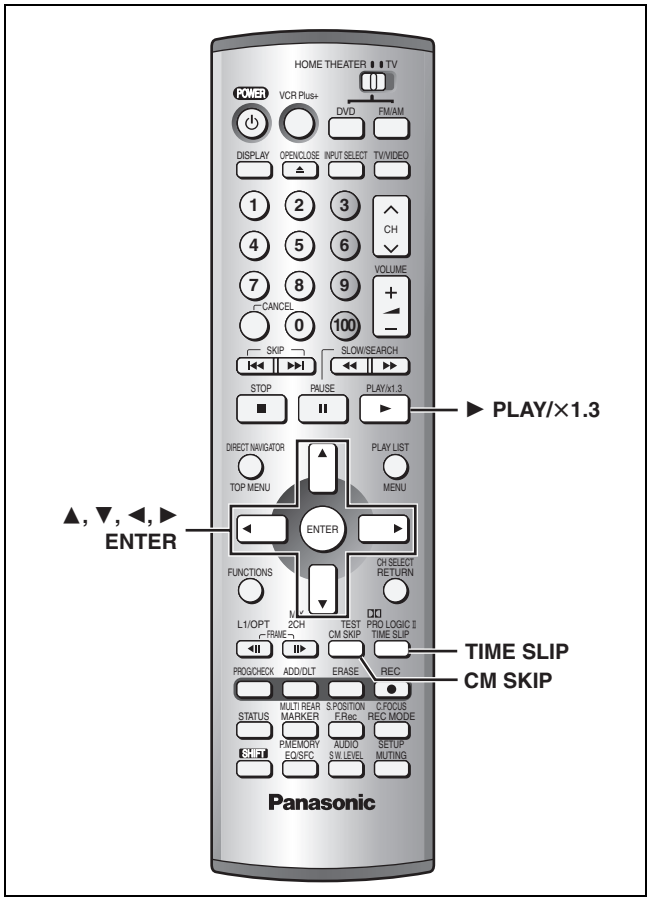
- This may not work with some discs.
- This works only when stopped with some discs (the screen saver is on the television).
- A group ([DVD-A]) or title ([DVD-V]) number can be specified while the screen saver is displayed.

e.g., [DVD-A] "5": [5]
[DVD-V] "5": [0] ➡ [5]

Playing bonus groups [DVD-A]

Some discs contain bonus groups. If a password screen appears after selecting a group, enter the password with the numbered buttons and press [ENTER]. Refer also to the disc's jacket.

PLAYING

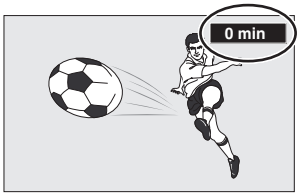


Selecting an amount of time to skip—Time Slip

[RAM] [DVD-R]

1 **During play**

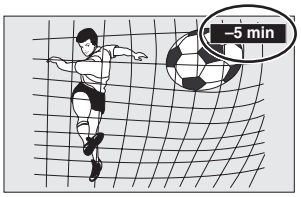
Press [TIME SLIP].



2 **Within 5 seconds**

Press [▲, ▼] to enter the time and then press [ENTER].

e.g., Go back to 5 minutes



Press to alter in one-minute units. Press and hold to alter in 10-minute units.

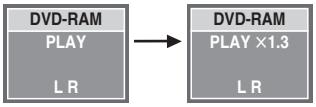
Quick View

[RAM] (Only with Dolby Digital)

You can increase the speed of play without disrupting the soundtrack.

During play

Press and hold [►] (PLAY/ ×1.3).



To return to normal speed

Press [►] (PLAY/×1.3).

[Note]

- This is canceled if you perform operations to change the soundtrack, skip or pause.
- This does not work if the setting is “Off” in “PLAY ×1.3 & Audio during Search” (➡page 39).
- This does not work when recording is in XP or FR mode.

Skipping a minute forward—CM Skip

[RAM] [DVD-R]

Play restarts from approximately a minute later. Convenient when you want to skip commercials etc.

During play

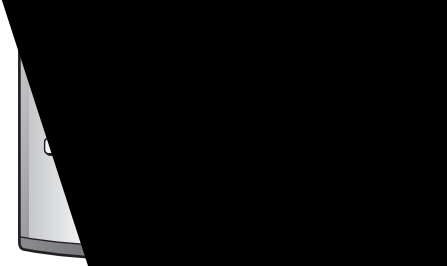
Press [CM SKIP].

[Note]

If the start of the next program is within one minute of the point you skipped from, play restarts from the beginning of that program.

TOP ME

▲, ▼, ◄,
ENTE



MP3

This unit can play MP3 files reco
Files are treated as tracks and fo

1 Press [TOP MENU

Sel

G: Group no.
T: Track no. in the group
TOTAL: Selected track no./
Total track no. in
groups

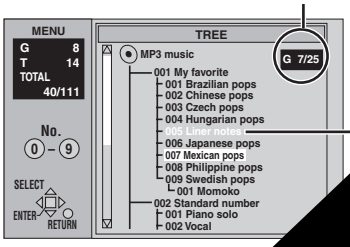
2

Using the tree screen to find a group

While the file list is displayed

1 Press [►] while a track is highlighted to display the tree screen.

Selected group no. /Total group no.
If the group has no track, "– –" is displayed as group number.

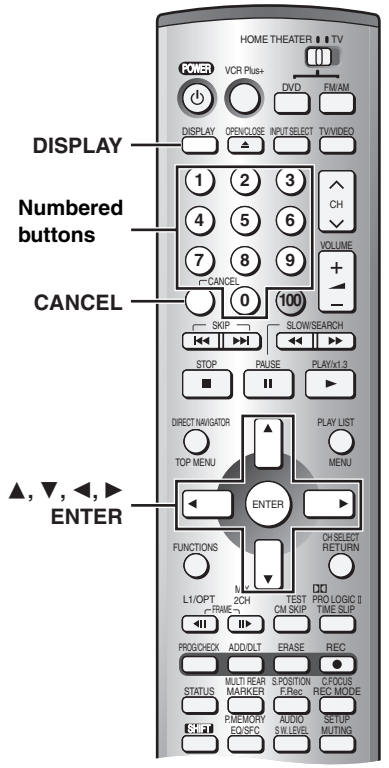


Yo

2 Press [▲,
and pres

The file li

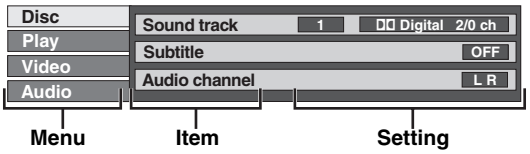
To return
Press [



Common procedures

1 Press [DISPLAY].

e.g., DVD-RAM



2 Press [▲, ▼] to select the menu and press [►].

3 Press [▲, ▼] to select the item and press [►].

4 Press [▲, ▼] to select the setting.

To clear the on-screen menus

Press [DISPLAY].

For your reference

- Some items can also be changed with the numbered buttons.
- Some items can be changed by pressing [ENTER].
- Depending on the condition of the unit (playing, stopped, etc.) and disc contents, there are some items that you cannot select or change.

Disc menu

Not available when playing CDs and MP3 discs.

e.g., DVD-RAM

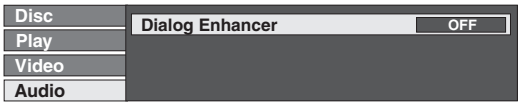
Item		Content
Sound track		**Soundtrack language** [DVD-A] [DVD-V] See [A] below.
		Audio attribute [RAM] [DVD-R] [DVD-A] [DVD-V] See [B] below.
		Karaoke vocals, on and off (Karaoke [DVD-V] only) Solo: ON⟷OFF Duet: OFF⟷V1+V2⟷V1⟷V2
Subtitle		**Subtitle language** [DVD-A] [DVD-V] See [A] below.
		Subtitle on/off [RAM] [DVD-R] [DVD-A] [DVD-V]
Angle		**Angle number** [DVD-A] [DVD-V]
STILL-P	**Page**	**Still picture number** [DVD-A] ●When "Return" is displayed Select "Return" and press [ENTER] to return to the default page. ●When "RANDOM" is displayed Select "RANDOM" and press [ENTER], the picture changes randomly each time you press [ENTER].
	Slide Show	(Display only) [DVD-A]
Audio channel		[RAM] [VCD] (➡page 19)
PBC		**Playback control on/off** [VCD] Indicates whether menu play (playback control) is on or off.

For your reference

- When playing back recordings of SAP broadcasts, "1+1 ch" will be displayed.
- You may have to use the menus on the disc to make a change to selectable soundtracks, subtitles, and angles if they are recorded on the disc.
- If the subtitles overlap closed captions recorded on discs, turn the subtitles off.

Audio menu

[DVD-A] [DVD-V]



Item	Content
Dialog Enhancer	(Dolby Digital, 3-channel or over only, including a center channel) The volume of the center channel is raised to make dialog easier to hear. ON⟷OFF

[A] **Soundtrack/Subtitle language**

ENG: English	SVE: Swedish	CHI: Chinese
FRA: French	NOR: Norwegian	KOR: Korean
DEU: German	DAN: Danish	MAL: Malay
ITA: Italian	POR: Portuguese	VIE: Vietnamese
ESP: Spanish	RUS: Russian	THA: Thai
NLD: Dutch	JPN: Japanese	∗: Others

[B] **Audio attributes**

LPCM/PPCM/DDigital/DTS/MPEG: Signal type
k (kHz): Sampling frequency
b (bit): Number of bits
ch (channel): Number of channels
e.g.,
3/2 .1ch

- .1: Low frequency effect (not displayed if there is no signal)
- 0: No surround
- 1: Mono surround
- 2: Stereo surround (left/right)
- 1: Center
- 2: Front left+Front right
- 3: Front left+Front right+Center

Play menu

These functions work only when the elapsed play time is displayed.

e.g., DVD-RAM

Item	Content	Remarks
Repeat play	Each time you press [▲, ▼]: [RAM] [DVD-R] PRG: Program All PL: Play list ([RAM]) OFF [DVD-V] Chapter Title OFF [DVD-A] MP3 Track Group OFF [VCD] CD Track All OFF To cancel: Select “OFF”.	●You cannot use repeat play to repeat an entire DVD-Audio, DVD-Video, MP3 discs or all the play lists on a DVD-RAM. ●[ERASE] does not work while in repeat play mode. **If the Video CD has playback control** While stopped (the screen saver is on the television), press the numbered buttons to select a track (➡page 19). Select the repeat mode.
Marker	[RAM] [DVD-R]: 999 positions [DVD-A] [DVD-V] [VCD] CD MP3: 5 positions (The markers clear when you open the disc tray.)	
	To mark a position Press [◀, ▶] to select an asterisk (∗) and press [ENTER]. **To recall a marker** Press [◀, ▶] to select a marker number and press [ENTER]. **To clear markers** Press [◀, ▶] to select a marker number and press [CANCEL].	[RAM] [DVD-R] **When marking positions 11 and above** Press [◀, ▶] to highlight “1–10”. Press [▲, ▼] to select “11–20”. [Note] ●You cannot use this feature if: –you are using a play list. [RAM] –protection (cartridge ➡page 8, disc ➡page 32) is set (you can still recall the markers to play a position). [RAM] ●Markers on DVD-RAM and DVD-R are ordered by time, so marker numbers can change when you add and delete them.

Video menu

Not available when playing CDs and MP3 discs.

Item	Content
Picture	**Normal:** Default setting **Soft:** Soft picture with fewer video artifacts **Fine:** Details are sharper **Cinema:** Mellows movies, enhances detail in dark scenes. **User:** You can make further adjustments. See below.
MPEG-DNR	(When any item other than “User” is selected) You can change the 3D NR, block NR, and mosquito NR settings (➡below) to on or off. ON←→OFF

■ When you have set “TV Type” to “Aspect 4:3 & 480P” or “Aspect 16:9 & 480P” in SETUP (➡page 11)

Item	Content
Progressive	**ON:** Enables progressive output **OFF:** Disables progressive output
Transfer (When progressive output is on)	Select the method of conversion for progressive output to suit the type of material being played (➡page 51, Film and video). **Auto1 (normal):** For film material **Auto2:** For film material (the same as Auto1, but able to convert 30-frame-per-second progressive video.) **Video:** For video material

■ When “User” is selected

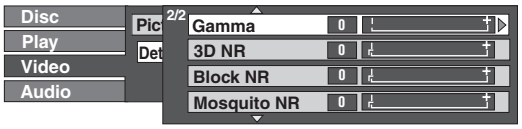
Select “Detail picture adjustment”. (“User” ➡ [◀] ➡ [▼] ➡ [ENTER])

Page 1/2 of “Detail picture adjustment”

Contrast	Increases the contrast between light and dark parts of the picture (−7 to +7).
Brightness	Brightens the picture (0 to +15).
Sharpness	Adjust the sharpness of the edges of the horizontal lines (−6 to +6).
Color	Adjusts the shade of the picture’s color (−7 to +7).

Press [ENTER] to enter the setting.

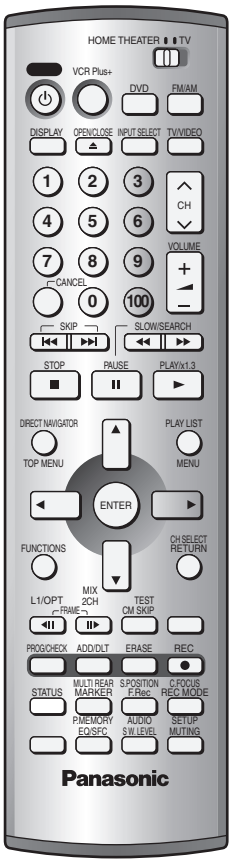
Press [▲] or [▼] until page 2/2 appears.



Page 2/2 of “Detail picture adjustment”

Gamma	Increases the brightness of the center ranges to improve detail and contrast in dark scenes (0 to +5).
3D NR	Reduces overall noise (0 to +4).
Block NR	Smoothes block noise (0 to +3).
Mosquito NR	Reduces the smudging that appears around contrasting sections of the picture (0 to +3).

Press [ENTER] to enter the setting.



Displays appear on the television when you operate the unit to let you know what operation was performed and what condition the unit is in.

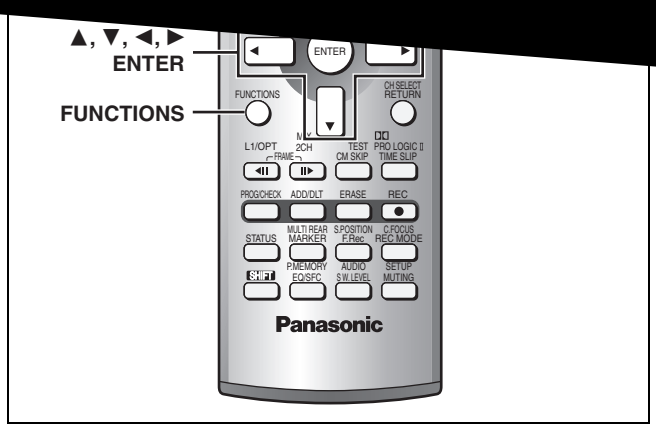
- You can change the setting in the SETUP menu so the first display does not appear automatically (➡page 39, Display—Status Messages).

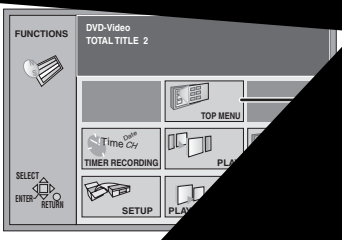
Changing the information displayed

Press [STATUS].

The display changes each time you press the button.

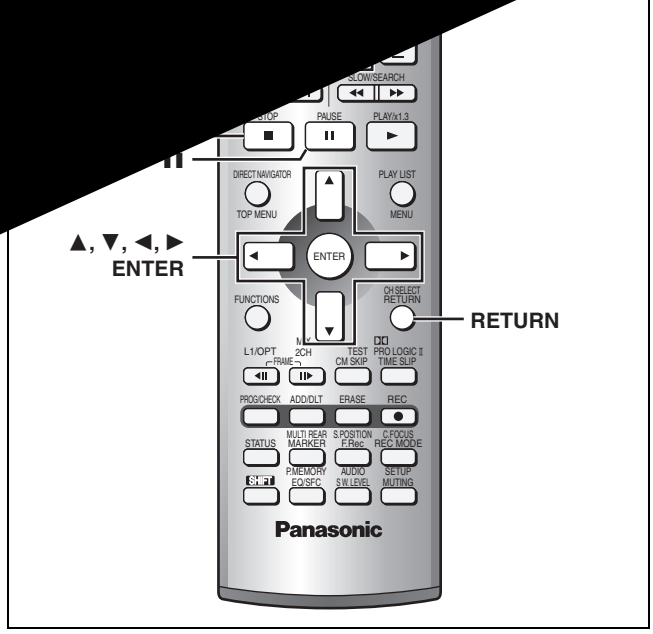
e.g., DVD-RAM





2 Press [▲, ▼, ◀, ▶] and press [ENTER]

PLAY FROM TOP
[RAM] [DVD-R]
Play will begin wit
[DVD-A] [DVD-V]
Play will avoi
contents i
disc to



[RAM] [DVD-R]

This page shows how to enter text for:
- Program titles for timer recording (➡pages 14 and 15)
  Program titles (➡page 30)
- Play list titles (➡page 28)
- Disc titles (➡page 32)

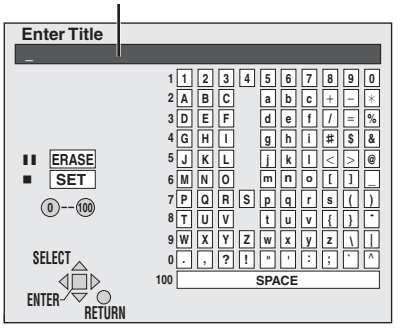
You can enter up to:
- 64 characters (DVD-RAM)
  – A maximum of 44 characters is possible when inputting a title from the timer recording menu.
- 40 characters for a disc title (DVD-R)
- 44 characters for a program title (DVD-R)

...eeding. [RAM]
... ➡page 32, program ➡page 30)

...ter the Enter Title screen appears

Press [▲, ▼, ◄, ►] to select the character and press [ENTER].

Title field: shows the text you have entered



Repeat step 1 to enter other characters.

2 Press [■].

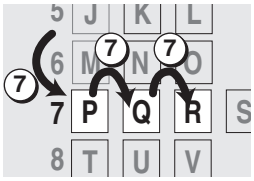
The title is entered and the screen disappears.
- You can also finish entering the title by selecting “SET” and pressing [ENTER].

To end input midway
Press [RETURN] (does not save any title information).

■ Using the numbered buttons to enter characters

e.g., entering the letter “R”

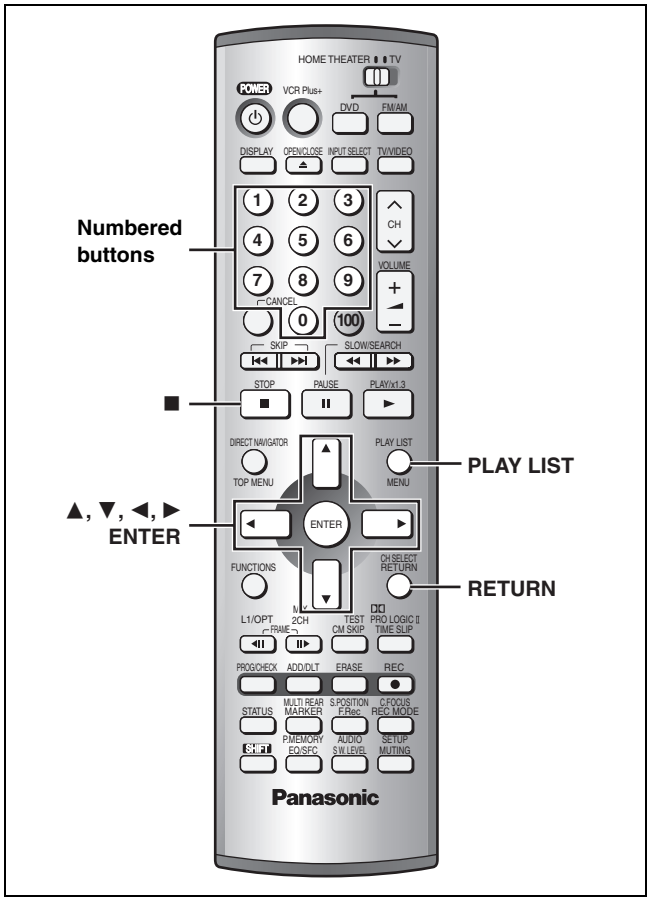
Press [7] to move to the 7th row.
Press [7] twice to highlight “R”.
Press [ENTER].



■ To erase a character

Press [▲, ▼, ◄, ►] to select the character you want to erase in the title field.
Press [❚❚].
You can also erase characters by selecting “ERASE” and pressing [ENTER].

[Note]
- The full title is shown in the Properties screen (➡pages 28 and 30), but if you enter a long title, only part of it is shown in the program list or play list screen.
- If you enter a long title, only part of it is shown in the menu screen after finalization. [DVD-R]



[RAM]
Specify start and end points to create scenes, then specify the order in which they are to be played. These scenes are not recorded separately so this doesn't use much capacity.
You can create a maximum of 99 play lists and 999 scenes.

Creating play list

Preparation
Release protection before proceeding.
(Cartridge ➡page 8, disc ➡page 32)

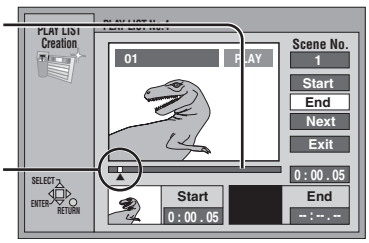
1 **While stopped**
Press [PLAY LIST].

2 **Press [▲, ▼] to select "–– ––/––" and press [ENTER].**

3 **Press [ENTER] at the start point.**

The length of the whole contents on the disc.

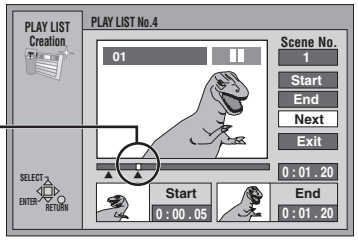
The location of the start point.



- You can use basic functions like fast forwarding and slow play (➡page 18).
- You can use the skip function to jump to another program (➡page 18).

4 **Press [ENTER] at the end point.**

The location of the end point.



To specify another scene
Select "Next" and press [ENTER], then repeat steps 3 and 4.

5 **Press [▲, ▼] to select "Exit" and press [ENTER].**
The play list screen appears.

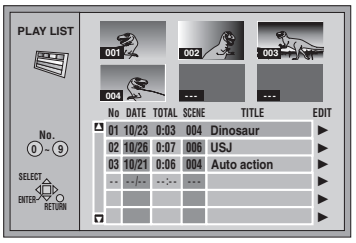
To clear the play list screen
Press [PLAY LIST].

To stop partway through
Press [RETURN].

For your reference
- You cannot specify an end point before a start point.
- You may not be able to specify points within 3 seconds of each other.
- Play pauses if the end of the last program on the disc is reached during this procedure.
- Depending on the state of recording, the actual number of play lists that can be recorded may be less than that specified in this manual.

Playing play lists

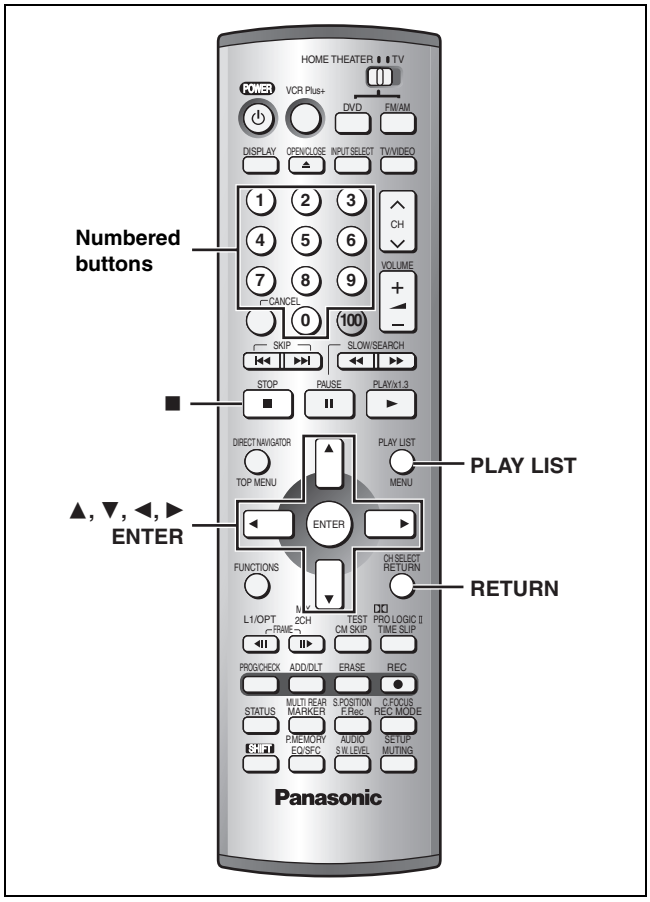
1 **While stopped**
Press [PLAY LIST].



2 **Press [▲, ▼] to select the play list and press [ENTER].**
You can also select play lists with the numbered buttons.
e.g., "5": [0] ➡ [5]
"15": [1] ➡ [5]

To stop play list play
Press [■].

EDITING



[RAM]

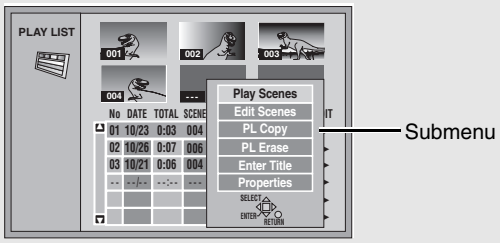
Common procedures

Preparation
Release protection before proceeding with “Edit Scenes”, “PL Copy”, “PL Erase” or “Enter Title”.
(Cartridge ➡page 8, disc ➡page 32)

1 **While stopped**
Press [PLAY LIST].

2 **Press [▲, ▼] to select the list.**

3 **Press [►] so the submenu appears.**



4 **Press [▲, ▼] to select the item and press [ENTER].**

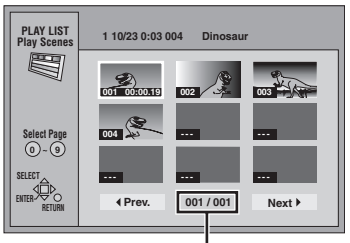
To clear the play list or scene list screen
Press [PLAY LIST].

To stop set up process
Press [RETURN].

[Note]
Once a play list or play list scene has been erased, it is irretrievable. Check carefully before proceeding.

Play Scenes

5 **Press [▲, ▼, ◄, ►] to select the scene and press [ENTER].**
The scene you select is played.



Page no./Total page no.

To show scene 10 and later
Press [▲, ▼, ◄, ►] to select “Next” and press [ENTER].
- You can also select a page of scenes with the numbered buttons.
  e.g., “5”: [0] ➡ [0] ➡ [5]
  “15”: [0] ➡ [1] ➡ [5]

To stop scene play
Press [■].

To clear the scene list
Press [RETURN].

PL Copy

5 **Press [◄] to select “Copy” and press [ENTER].**
The copied play list appears at the bottom of the list.

PL Erase

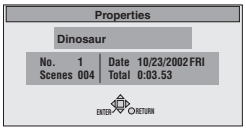
5 **Press [◄] to select “Erase” and press [ENTER].**
The play list is erased.

Enter Title

Entering text (➡page 26)

Properties

Play list information (e.g., time and date) is shown.



EDITING

Edit Scenes

5 Press [◄, ►

6 Press [▲, ▼, ◄, ► where you want to press [ENTER].

7 Press [ENTER] at the s scene.

8 Press [ENTER] at the end point of the scene.

To add other scenes
Press [▲, ▼] to select "Next" and press [ENTER], then repeat steps 6–8.

9 Press [▲, ▼] to select "Exit" and press [ENTER].
The new scene is inserted before the highlighted scene.

To re
Press [
repeat step

9 Press [press [EN
The re-edited scene

6 Press [▲, ▼, ◄, ►] to select the scene and press [ENTER].

7 Press [▲, ▼, ◄, ►] to select the place where you want to move the scene to R].
erted before the highlighted

6 Press [▲, ▼, ◄, ►] to sele scene and press [ENTER].

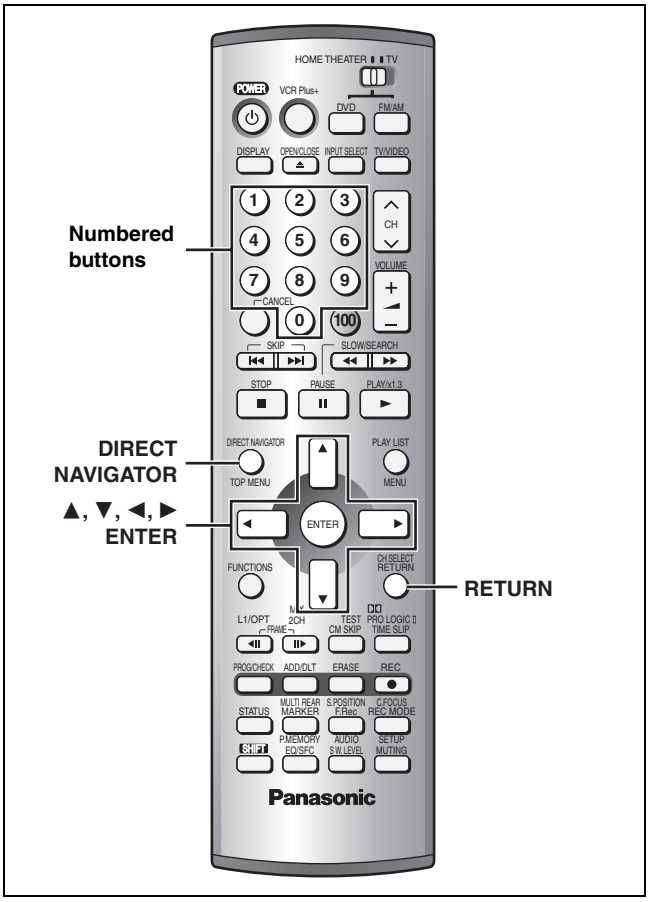
7 Press [◄] to select "Yes" and pres [ENTER].
The selected scene is erased from the play list.

To erase other scenes
Repeat steps 6 and 7.

[Note]
The play list itself is erased if you erase all the scenes in it.

ast forwarding and slow play (➡page 18).
ump to another program (➡page 18).
efore a start point.
ints within 3 seconds of each other.
program is reached during this procedure.
ng, the actual number of play lists or scenes that can be recorded may be less than that specified in this manual.

- **You cannot edit still picture images.**



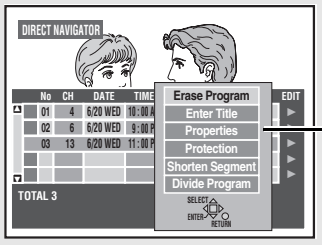
Common procedures

Preparation
Release protection before proceeding with “Erase Program”, “Enter Title”, “Protection”, “Shorten Segment” or “Divide Program”. [RAM]
(Cartridge ➡page 8, disc ➡page 32)

1 Press [DIRECT NAVIGATOR].

2 Press [▲, ▼] to select the program.
You can also select programs with the numbered buttons.
e.g., “5”: [0] ➡ [5]

3 Press [►] so the submenu appears.



Submenu

4 Press [▲, ▼] to select the item and press [ENTER].

To clear the program list
Press [DIRECT NAVIGATOR].

To stop set up process
Press [RETURN].

[Note]
Once a program is erased, divided, or a segment is shortened, it cannot be restored to it’s original state. Make certain before proceeding.
- Once a program is erased or a segment is shortened, the play list which was created from that program is also erased.

Erase Program

[RAM] [DVD-R]

5 Press [◄] to select “Erase” and press [ENTER].
The program is erased.

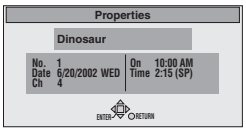
[Note]
- The disc’s available recording time may not increase after erasing short programs.
- Computer data cannot be erased.
- The available recording time on DVD-R does not increase when you erase programs.

Enter Title

[RAM] [DVD-R]
Entering text (➡page 26)

Properties

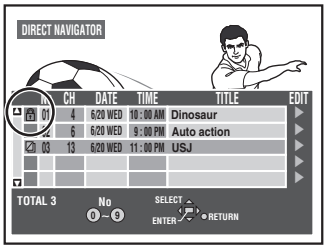
[RAM] [DVD-R]
Program information (e.g., time and date) is shown.



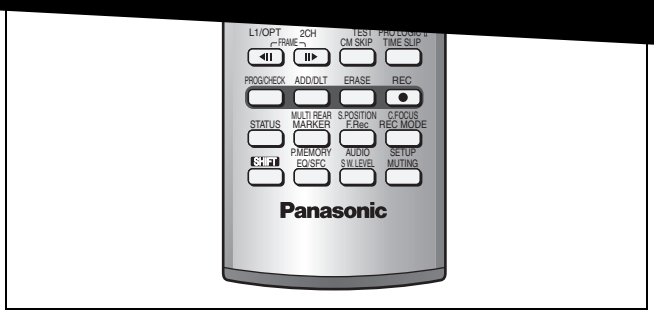
Protection

[RAM]
If set, this will protect the program from accidental erasure.

5 Press [◄] to set protection and press [ENTER].
The lock symbol appears when the program is write-protected.



EDITING

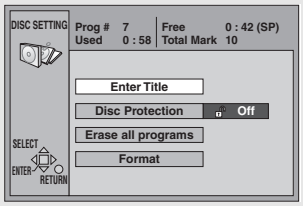


Common procedures

Preparation
Release protection before proceeding with “Enter Title”, “Disc Protection”, “Erase all programs” or “Format”. [RAM]
(Cartridge ➡page 8, disc ➡right, program ➡page 30)

1 **While stopped**
Press [FUNCTIONS].

2 **Press [▲, ▼, ◄, ►] to select “DISC SETTING” and press [ENTER].**
e.g., DVD-RAM



3 **Press [▲, ▼] to select the item and press [ENTER].**

To stop set up process
Press [RETURN].

[Note]
Once all programming has been erased or the disc has been formatted, the contents cannot be restored. Check carefully before proceeding.
- Once a program is erased the play list which was created from that program is also erased.

Erase all programs

[RAM]

4 **Press [◄] to select “Yes” and press [ENTER].**

5 **Press [◄] to select “Start” and press [ENTER].**
All programs and play lists are erased.

[Note]
- Computer data cannot be erased.
- Erase does not work if one or more programs are protected.

Format

[RAM]
Some DVD-RAM are unformatted. Format them before using them in this unit. Formatting also allows you to erase the entire contents of a disc.

Preparation
If the disc is dirty, clean it with the recommended cleaner (➡page 53) before formatting.

4 Press [◀] to select “Yes” and press [ENTER].

5 Press [◀] to select “Start” and press [ENTER].

Formatting starts.
- A message appears when formatting is finished.

6 Press [ENTER] to complete the procedure.

To stop formatting
Press [RETURN].
- You can cancel formatting if it takes more than 2 minutes. The disc must be reformatted if you do this.

[Note]
- **Do not disconnect the AC power supply cord while the message “Formatting the disc” is on the television. This can render the disc unusable.**
- Formatting normally takes a few minutes, however it may take up to a maximum of 70 minutes.
- The contents on the disc are erased when you format it even if you have set program or disc protection.
- It may not be possible to use a disc on this unit if you cannot format it.
- Formatting cannot be performed on DVD-R or CD-R/RW.
- Formatting erases all contents on the disc, including computer data.

Finalize

[DVD-R] (DVD-R recorded on this unit only)
You can play DVD-R on compatible DVD players by finalizing them on this unit, effectively making them into DVD-Video that complies with DVD-Video standards.

4 Press [◀] to select “Yes” and press [ENTER].

5 Press [◀] to select “Start” and press [ENTER].

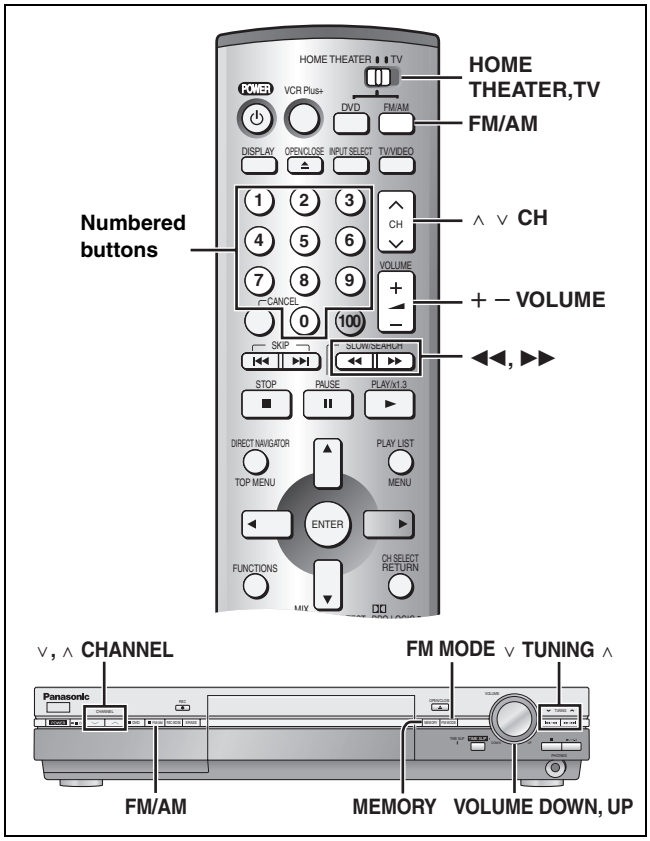
Finalizing starts.
- A message appears when finalizing is finished.

6 Press [ENTER] to complete the procedure.

[Note]
- **Do not disconnect the AC power supply cord while the message “Finalizing the disc” is on the television. This will render the disc unusable.**
- Finalizing takes up to 15 minutes.

After finalizing..
- You cannot record or perform editing such as giving titles and erasing programs.
- Programs longer than 5 minutes are divided into about five-minute chapters.
- There is a pause of several seconds between program segments.
- These DVD-R can be played on other Panasonic DVD players, but this is not guaranteed. Play may not be possible due to the player you are using, the DVD-R, or the condition of the recording. Play the disc using this unit if you experience problems with other equipment.
  Visit Panasonic’s homepage for more information about DVDs.
  http://www.panasonic.com/playDVD-R

For your reference
The markers you entered (➡pages 18 and 23) will be lost.



Preparation
- Switch [HOME THEATER, TV] to "HOME THEATER".
- Press [FM/AM] to select "FM" or "AM" as the source.

Manual tuning

1 Press [∨ TUNING] or [TUNING ∧] to select the frequency of the required station.

Remote control: Press [◀◀] or [▶▶].

TUNED: Displayed when a radio station is tuned.

ST: Displayed when a stereo FM broadcast is being received.

Press and hold [∨ TUNING] or [TUNING ∧] ([◀◀] or [▶▶] on the remote control) until the frequency starts scrolling to start automatic tuning. Tuning stops when a station is found.

2 Adjust the volume.

Main unit only

■ If noise is excessive

Press [FM MODE].

Each time you press the button:

FM: Changes between stereo and forced monaural.

AM: BP1⟷BP2 (BP=Beat Proof)
Select either BP1 or BP2, whichever receives better reception.

The FM mode is canceled when you change the frequency.

■ FM frequency step

The step is factory-set to 0.2 MHz, but you can change it to receive broadcasts allocated 0.1-MHz steps.

1 Press [FM/AM] to select "FM".
2 Press and hold [FM/AM].
After a few seconds the display changes to show the current minimum frequency. Continue to hold the button down. The minimum frequency changes and the step is changed.

To return to the original step, repeat the above steps.

[Note]
Any FM and AM frequencies preset in channels will be initialized by this procedure. Preset them again.

Preset tuning

Preset channels to make selection simple.
Up to 12 stations can each be set in the FM and AM bands.

Automatic presetting

Main unit only

1 Tune to "FM 87.9" MHz or "FM 87.5" MHz (➡ left).

2 Press and hold [MEMORY].

Release the button when "AUTO" is displayed.

The tuner presets all the stations it can receive into the channels in ascending order.
"SET OK" is displayed when the stations are set. The last station to be set is then played.

3 Tune to "AM 520" kHz.

Repeat step 2 for AM automatic presetting.

"ERROR" is displayed
Presetting was unsuccessful. Preset manually.

Manual presetting

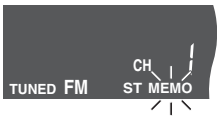
Main unit only

1 Tune to the station (➡ left).

2 Press [MEMORY].

3 While "MEMO" is flashing

Press [∨, ∧ CHANNEL] to select a channel and press [MEMORY].



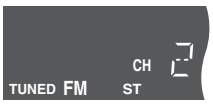
The station occupying a channel is erased if another station is preset in that channel.

Selecting channels

1 Press [FM/AM] to select "FM" or "AM".

2 Press the numbered buttons or [∧ ∨ CH] to select the channel.

e.g., "2": [0] ➡ [2]
"12": [1] ➡ [2]



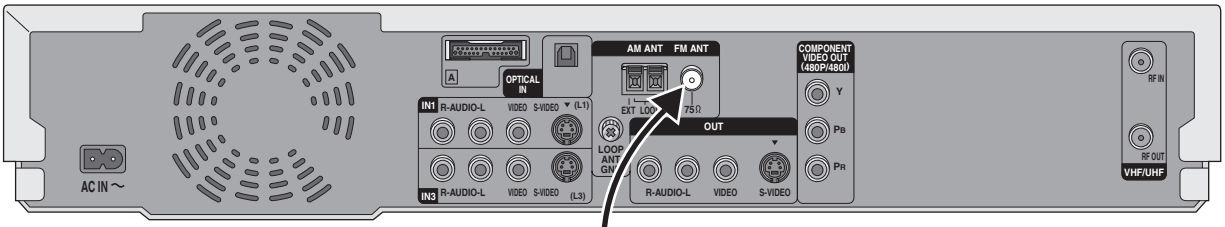
[Note]
If there is nearby electrical interference during auto tuning the frequency may come to a halt without locating a channel. Turn off the power of the nearby electrical equipment.

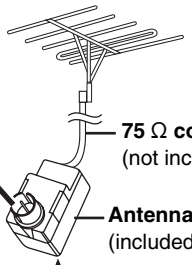
Optional FM antenna connection

Use FM outdoor antenna if radio reception is poor.

[Note]

- Disconnect the outdoor antenna when the unit is not in use.
- Do not use the outdoor antenna during an electrical storm.





75 Ω coaxial cable
(not included)

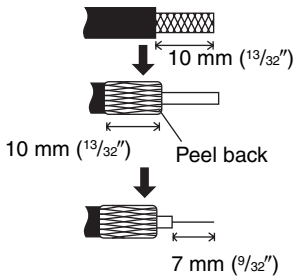
Antenna plug
(included)

FM outdoor antenna (Using a television antenna)

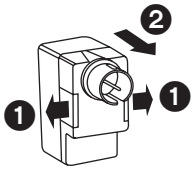
- Disconnect the FM indoor antenna.
- The antenna should be installed by a competent technician.

Rework your outdoor antenna's 75 Ω coaxial cable as follows.

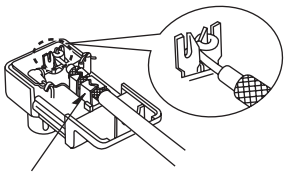
Remove a piece of the outer vinyl insulator.



Carefully pull the tabs apart to remove the cover.



Install the coaxial cable.
Clamp the cable conductor, and wind it on so that it does not contact anything else.



Clamp with pliers

Attach the cover.

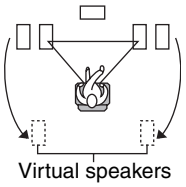
- Dolby Digital and DTS are digital encoding systems used on DVD to carry surround sound. Both were originally developed for use in cinemas.
- This unit automatically recognizes and decodes these systems.

Play a Dolby Digital or DTS source.

The Dolby Digital or DTS indicator lights.

Virtual Rear Surround

This mode is useful if you have to place your surround speakers near the front speakers due to the layout of your room.
This mode makes it seem like the sound from the surround speakers is coming from behind you.

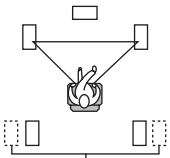


Press and hold [SHIFT]+[MULTI REAR] for more than 5 seconds.

Each time you do this:
V.R.S ON⟷V.R.S OFF

Multi Rear Surround

This mode makes it seem like sound is coming from multiple rear surround speakers virtually when connected with surround speakers.

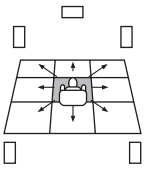


Press [SHIFT]+[MULTI REAR].

Each time you do this:
M.R.S ON⟷M.R.S OFF

Seat position

Using this function makes you feel like you are sitting in the ideal seating position (in the center of the circle formed by the speakers), even if you cannot due to the layout of your room.



1 Press [SHIFT]+[S.POSITION].

2 While "SEAT POSITION" is displayed

Press [▲, ▼, ◄, ►] to select a position.

To cancel
Press [SHIFT]+[S.POSITION] again.

[Note]
While virtual rear surround is on, the seat position is changed in three horizontal steps.

Adjusting the bass

Press [S W.LEVEL].

Each time you press the button:
SUB W 1→SUB W 2→SUB W 3→SUB W 4 (factory preset)

Speaker level adjustments

Adjust the level of the speakers so they are the same apparent level as the front speakers where you would normally be sitting and listening. (L, R ➡below, Balance)

Preparation
- Dolby Digital and DTS: Turn off the other sound field systems.
- Dolby Pro Logic II: Press [SHIFT]+[PRO LOGIC II].

1 Press [SHIFT]+[TEST] to output a test signal.
Lch: Front left
Cch: Center
Rch: Front right
RSch: Right surround
LSch: Left surround

2 Press [VOLUME +] or [−] to set the volume level normally used for listening.

3 Press [▲] (to increase) or [▼] (to decrease).
L, R: (➡below, Balance)
C, RS, LS: −6 dB to +6 dB

To stop the test signal, press [SHIFT]+[TEST] again.

■ To adjust speaker level during play

1 Press [SHIFT]+[CH SELECT] to select the speaker.
L R→Cch→RSch→LSch→SWch
SW: Subwoofer
- You can only adjust SW if there is output from the subwoofer channel.

2 Press [▲] (to increase) or [▼] (to decrease).
L, R: (➡below, Balance)
C, RS, LS: −6 dB to +6 dB
SW: −6 dB to +6 dB

Balance

You can adjust the balance of the front speakers.
1 Press [SHIFT]+[CH SELECT] to select "L R".
2 Press [◄, ►] to adjust the "L", "R" balance.

Summary of settings

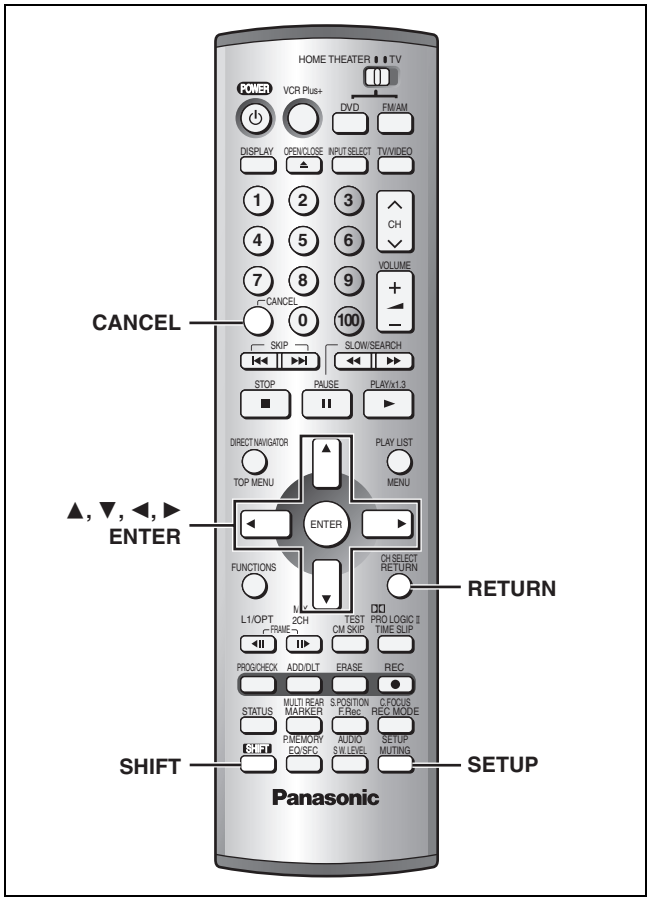
This chart shows the initial settings for this unit. See pages 40–43 for details on menu operation.

●Underlined items are the factory presets.

Tabs	Menus		Options
Channel	**Antenna System** (➡page 40)		●TV ●CATV
	Auto Channel Setting (➡page 40)		
	Preset Channel Caption (➡page 41)		
	Manual Channel Caption (➡page 41)		
	VCR Plus+ CH Setting (➡page 10)		
	Off Timer Select how long the unit remains on when it is not being used.		●2 hr ●6 hr ●Off
	Remote Control Code (➡page 42)		● Set Code 1 ●Set Code 2 ●Set Code 3
	to Clock Setting (➡page 43)		
	al Clock Setting (➡page 43)		
	one Adjust (➡page 43)		●−1 ●0 ●+1
	ze Setting Th all values in the SETUP menus, except for the cloc l settings, ratings level, and display language, to the ettings.		●Yes ●No
Disc (Playing a DVD disc)	**Audio** Choose th nguage.	Some discs start in a certain language despite any changes you make here.	●English ●French ●Spanish ●Original: The original language of each disc will be selected. ●Other ✳✳✳✳: Input a code (➡page 50).
	Subtitle Choose the subt age.		●Automatic: If the language selected for "Audio" is not available, subtitles of that language will automatically appear if available on that disc. ●English ●French ●Spanish ●Other ✳✳✳✳
	Menus Choose the language for nus.		●English ●French ●Spanish ●Other ✳✳✳✳
	Ratings Set a ratings level to limit DVL play. The password screen is shown when you sele s 0 to 7. **To enter a password** 1 Input a 4-digit password with the ered buttons. ●If you enter a wrong number, pre NCEL] to erase it. ●**Do not forget your password.** 2 Press [ENTER]. ●The lock symbol appears closed to sh e rating is locked. 3 Press [ENTER] to confirm the 4 digits.		**Setting ratings (When level 8 is selected)** 8 No Limit: All DVD-Video can be played. 1 to 7: Prohibits play of DVD-Video with corresponding ratings recorded on them. 0 Lock All: Prohibits play of all DVD-Video. **Changing ratings (When level 0–7 is selected)** ●Unlock Recorder ●Change Password ●Change Level ●Temporary Unlock
	If you insert a DVD-Video that exceeds the rating you set, a message appears on the television. Follow the on-screen instructions.		
	DVD-Video mode Select how to play pictures contained on some DVD-Au The setting returns to "Off" when you change the disc or the unit off.		●On: You can play DVD-Video content on DVD-Audio. ●Off: DVD-Audio are played as DVD-Audio.
Video	**3-D Y/C Separation**		On: Reduces noise for recording by separating the luminance (Y) and color (C) signals received from the television station. ●O educes the ghosting that occurs when recording fast ving images.
	Hybrid VBR Resolution		●Autom Video compression is automated providing efficient ecording. ●Fixed: deo compression is fixed when recording providing s oth video play.
	Still Mode Select the type of picture shown when you pause play.		●Automatic ●Field: Less blu d field stills are shown. Select if jittering occurs wh "Automatic" is selected. ●Frame: Sharper fran stills are shown. Select if small text or fine patterns c not be seen clearly when "Automatic" is selected.

Continued on next page.

Tabs	Menus	Options
Video	**Seamless Play** Turn seamless play on or off on discs with play lists. ●Seamless Play does not work with programs recorded in LPCM or when using Quick View.	●On: The scenes in play lists are played seamlessly. This may cause shifting of the points where scenes change. Some play lists cannot be played seamlessly. ●Off: The points where scenes in play lists change are played accurately, but the picture may freeze for a moment.
	Black Level Control Select normal, lighter or darker for adjusting the black level control to the desired setting for picture enhancement.	●**Input Level** (Lighter/Darker): Adjusts the black level of the input signal (e.g., L1, L2, L3) ●**Composite & S Video Output Level** (Lighter/Darker): When connected to a TV through the VIDEO OUT or S-VIDEO OUT terminal ●**Component Video Output Level** (Lighter/Normal/Darker): When connected to a TV through the COMPONENT VIDEO OUT ($Y/P_B/P_R$) terminals
Audio	**PLAY ×1.3 & Audio during Search** [RAM] [DVD-R] [DVD-A] [DVD-V] [VCD] Choose whether to have sound during the first level of fast-forward. ●You may hear sound regardless of this setting with some discs. [DVD-A]	●On ●Off: Quick View (➡page 20) does not work.
	D. Range Compression [DVD-V] (Dolby Digital only) Change the dynamic range for late night viewing.	●On ●Off
	Select MTS Select whether to record the main or secondary audio type (SAP) when recording to DVD-R or when recording using LPCM sound (“Audio Mode for XP Recording” ➡below).	●Main ●SAP –You cannot change secondary audio when recording audio to DVD-R from an external source.
	Audio Mode for XP Recording Choose the audio type when recording with XP mode. ●Sound recordings made using LPCM require more information than usual. Consequently the picture quality of LPCM recordings may be less than that of normal XP mode recordings.	●Dolby Digital (➡page 51) ●LPCM (➡page 51)
	Speaker Set the delay time for your center and surround speakers.	Multi Channel Center: 0.0/1.0/2.0/3.0/4.0/5.0 ms Surround (L/R): 0.0/5.0/10.0/15.0 ms
Display	**Status Messages** Choose whether to show on-screen messages automatically.	●Automatic ●Off
	Language of Display Message Choose the language for these menus and the on-screen messages.	●English ●Español ●Français
	Blue Background	●On ●Off: When you do not want to have the unit show the blue background when reception is weak.
	FL Display Changes the brightness of the unit’s display and the volume dial LED goes on or off.	●Bright ●Dim ●Automatic: The display turns dark during play, and reappears momentarily if a button is pressed. When the power is turned off all displays disappear. While using this mode the standby power consumption can be reduced.
TV Screen	**TV Type** (➡page 11) Choose the setting to suit your television.	●Aspect 4:3 & 480I ●Aspect 4:3 & 480P ●Aspect 16:9 & 480I ●Aspect 16:9 & 480P
	4:3 TV Settings for DVD-Video Select how DVD-Video widescreen picture is shown on a 4:3 standard aspect television.	●Pan & Scan (➡page 51): Video recorded for a widescreen is played as Pan & Scan (unless prohibited by the producer of the disc). ●Letterbox (➡page 51): Video recorded for a widescreen is played in the letterbox style.
	4:3 TV Settings for DVD-RAM Select how DVD-RAM widescreen picture is shown on a 4:3 standard aspect television.	●4:3: Programs played as recorded. ●Pan & Scan: Video recorded for a widescreen is played as Pan & Scan. ●Letterbox: Video recorded for a widescreen is played in the letterbox style.

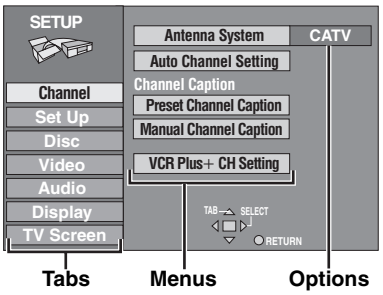


Common procedures

See pages 38 and 39 for menu and option details.

1 **While stopped**

Press [SHIFT]+[SETUP] to show the menus.



2 **Press [▲, ▼] to select the menu's tab and press [►].**

3 **Press [▲, ▼] to select the menu and press [ENTER].**

4 **Press [▲, ▼] to select the option and press [ENTER].**

The screen now shows the menu again.

- Some items require different operations. Follow the on-screen instructions, or read the following explanations.

To return to the previous screen
Press [RETURN].

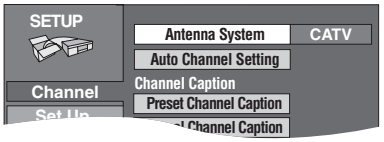
To exit the SETUP screen
Press [SHIFT]+[SETUP].

Antenna System and Auto Channel Setting

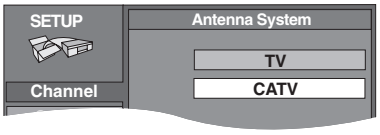
The unit sets the channels automatically.
First, select to suit the type of antenna you are using. Channels are set corresponding to the antenna system you select.

While SETUP menu screen is displayed

1 **Press [▲, ▼] to select "Channel" and press [►].**



2 **Press [▲, ▼] to select "Antenna System" and press [ENTER].**



3 **Press [▲, ▼] to select "TV" or "CATV" and press [ENTER].**

The screen shown in step 1 reappears.

4 **Press [▲, ▼] to select "Auto Channel Setting" and press [ENTER].**

If you have not yet set clock, the "Auto Channel/Clock Setting" screen appears.

5 **Press [ENTER] to start Auto Channel Setting.**

This takes a few minutes. When finished, press [ENTER].

To cancel partway
Press [RETURN].

SETTINGS

Other channel settings

You can give stations captions. You can use the preset captions, or manually enter new ones yourself.
The captions you enter are displayed when the channel is displayed and in the Direct Navigator screen.

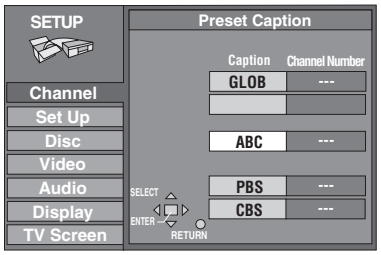
While SETUP menu screen is displayed

1 Press [▲, ▼] to select “Channel” and press [►].

Preset Channel Caption

You can give preset captions to the channels.

2 Press [▲, ▼] to select “Preset Channel Caption” and press [ENTER].



3 Press [▲, ▼] to select the caption and then press [►].

You can choose from the following captions.
ABC, PBS, CBS, CNN, FOX, ESPN, NBC, HBO, A&E, AMC, FAM, MAX, MTV, SHOW, TBS, USA, TNT, CBC, UPN, CTV, WB, TSN, DSC, GLOB

- The screen scrolls a page at a time if you press and hold [▲, ▼].

4 Press [▲, ▼] to select the channel corresponding to the caption and then press [◄].

- Channels are not displayed if they do not contain a station or if captions have been added manually.
- To delete the channel number, press [CANCEL].

Repeat steps 3 and 4 as necessary.

5 Press [ENTER].

Manual Channel Caption

You can set channel captions manually.

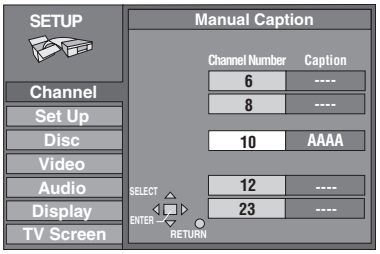
2 Press [▲, ▼] to select “Manual Channel Caption” and press [ENTER].

3 Press [▲, ▼] to select the channel and then press [►].

- Channels are only displayed if they contain a station and if preset captions have not been added.

4 Press [▲, ▼] to select the first character and then press [►].

- You can choose from the following characters:
  A–Z, 0–9, -, &, !, /, (space)
- To delete the caption, press [CANCEL].
- Repeat step 4 to enter the other characters.



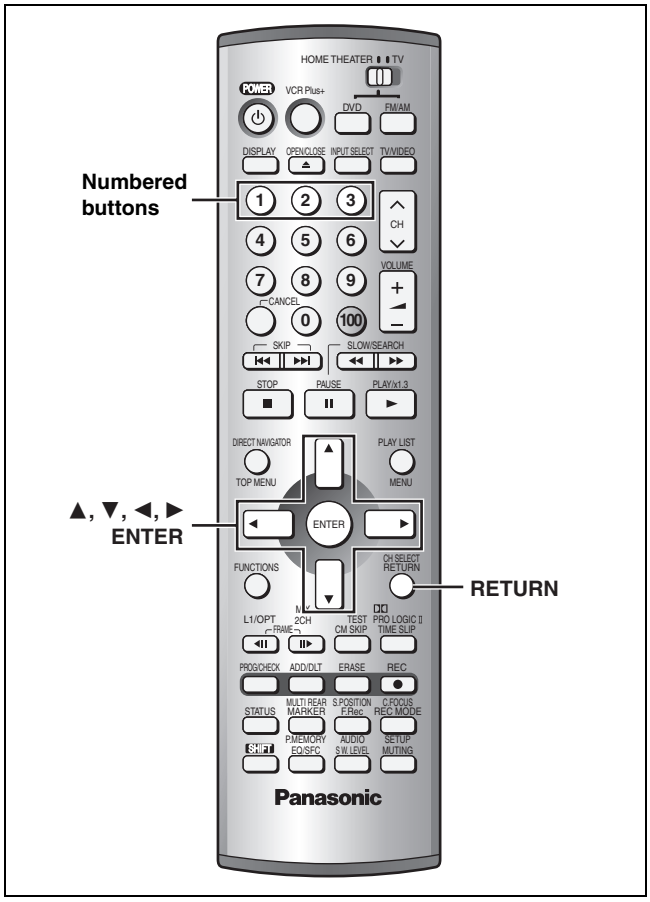
5 Press [◄, ►] to return to the Channel Number column when you are finished.

Repeat steps 3–5 as necessary.

6 Press [ENTER].

To return to the previous screen
Press [RETURN].

SETTINGS



Changing the remote control code

Panasonic DVD players and recorders use the same remote control system so they may respond unintentionally to a command from this remote control. Change the code on this unit and its remote control (the two must match) if you place equipment close together.
●Use "1", the factory set code, under normal circumstances.

While SETUP menu screen is displayed

1 Press [▲, ▼] to select "Set Up" and press [►].

2 Press [▲, ▼] to select "Remote Control Code" and press [ENTER].

3 Press [▲, ▼] to select the code (1, 2, or 3) and press [ENTER].

The remote control code on the unit has been set.

4 While pressing [ENTER] on the remote control, press and hold for about 2 seconds the numbered button ([1], [2] or [3]) corresponding to the code you selected in step 3.

The remote control code on the remote control has been set.

The following display appears when you use a remote control with a different code.

The unit's remote control code

Change its code to match the unit's (➡step 4).

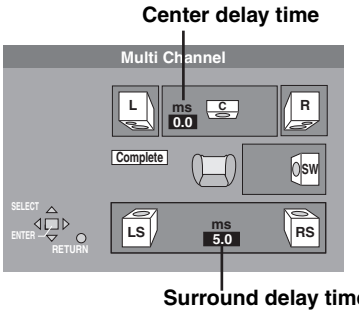
Changing the delay time (Speaker)

Enhance sound perception using this feature. Adjust the delay time for Dolby Digital when receiving multi-channel digital audio broadcast on satellite or cable TV, or for Dolby Pro Logic II when Dolby Pro Logic II is turned on.

While SETUP menu screen is displayed

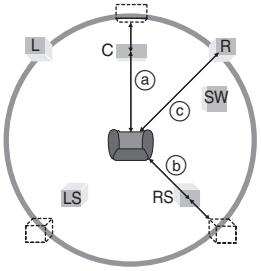
1 Press [▲, ▼] to select "Audio" and press [►].

2 Press [▲, ▼] to select "Speaker" and press [ENTER].



3 Press [▲, ▼] to select the delay time box and press [ENTER].

4 Press [▲, ▼] to adjust the delay time and press [ENTER].



Values
If distance ⓐ or ⓑ is greater than or equal to distance ⓒ, set to "0".
If distance ⓐ or ⓑ is less than distance ⓒ, set as follows.

ⓐ **Center speaker**

Difference	Setting
Approx. 30 cm (1 foot)	1.0 ms
Approx. 60 cm (2 feet)	2.0 ms
Approx. 90 cm (3 feet)	3.0 ms
Approx. 120 cm (4 feet)	4.0 ms
Approx. 150 cm (5 feet)	5.0 ms

ⓑ **Surround speakers**

Difference	Setting
Approx. 150 cm (5 feet)	5.0 ms
Approx. 300 cm (10 feet)	10.0 ms
Approx. 450 cm (15 feet)	15.0 ms

When you change the surround speaker setting for Dolby Digital, the setting also changes for Dolby Pro Logic II.

When you are finished
Press [◄] to select "Complete" and press [ENTER].

SETTINGS

Clock settings

Preparation

If you connect the unit through a cable TV box or satellite receiver (➡page 44), tune to your local PBS station before starting auto clock setting. Use manual clock setting if auto clock setting does not work or if there is no local PBS channel in your area.

While SETUP menu screen is displayed

1 Press [▲, ▼] to select “Set Up” and press [►].

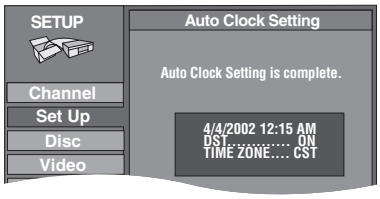
Auto Clock Setting

2 Press [▲, ▼] to select “Auto Clock Setting” and press [ENTER].

If you have not yet set channels, the “Auto Channel/Clock Setting” screen appears.

3 Press [ENTER].

Auto setting starts. This can take some time, up to a few hours in some cases. (To stop auto clock setting, press [RETURN].) The following screen appears when setting is complete. Press [ENTER].



- If the time was not set correctly, use manual clock setting or time zone adjust.
- DST, Daylight Saving Time, shows the summertime setting.
- TIME ZONE shows the time difference from Greenwich meantime (GMT).

EST (Eastern Standard Time)	= GMT −5
CST (Central Standard Time)	= GMT −6
MST (Mountain Standard Time)	= GMT −7
PST (Pacific Standard Time)	= GMT −8
AST (Alaska Standard Time)	= GMT −9
HST (Hawaii Standard Time)	= GMT −10

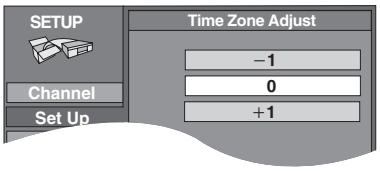
For other areas: xx hr

Time Zone Adjust

Adjust the time zone (−1 or +1) if it was not set correctly with auto clock setting.

You cannot change this setting if you set the clock manually.

2 Press [▲, ▼] to select “Time Zone Adjust” and press [ENTER].

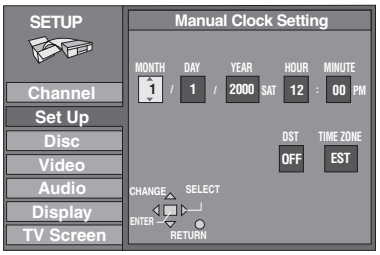


3 Press [▲, ▼] to select “−1”, “0”, or “+1” and press [ENTER].

The “Set Up” screen (➡step 1) reappears.

Manual Clock Setting

2 Press [▲, ▼] to select “Manual Clock Setting” and press [ENTER].



3 Press [◄, ►] to select the item you want to change and press [▲, ▼] to change the setting.

MONTH ⟷ DAY ⟷ YEAR ⟷ HOUR (12-hour display)
↳ TIME ZONE ⟷ DST ⟷ MINUTE ↵

DST (Daylight Saving Time): ON or OFF

If you select “ON”, the clock is advanced one hour starting at 2 a.m. on the first Sunday in April and ending at 2 a.m. on the last Sunday in October.

TIME ZONE (➡left):

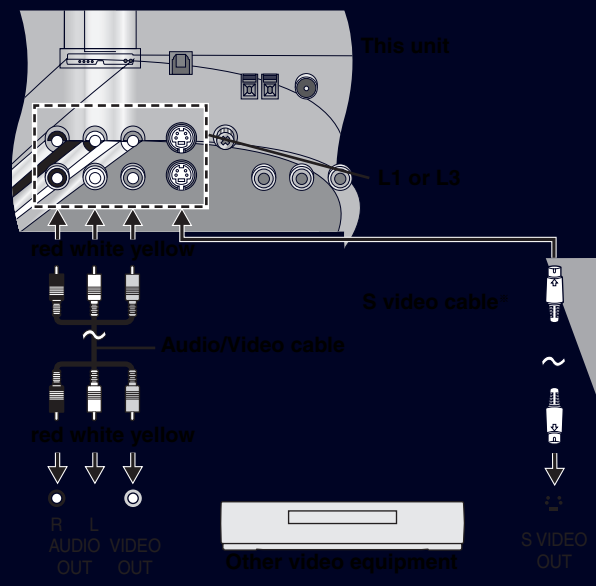
EST ⟷ CST ⟷ MST ⟷ PST ⟷ AST ⟷ HST
(−5) (−6) (−7) (−8) (−9) (−10)

4 Press [ENTER].

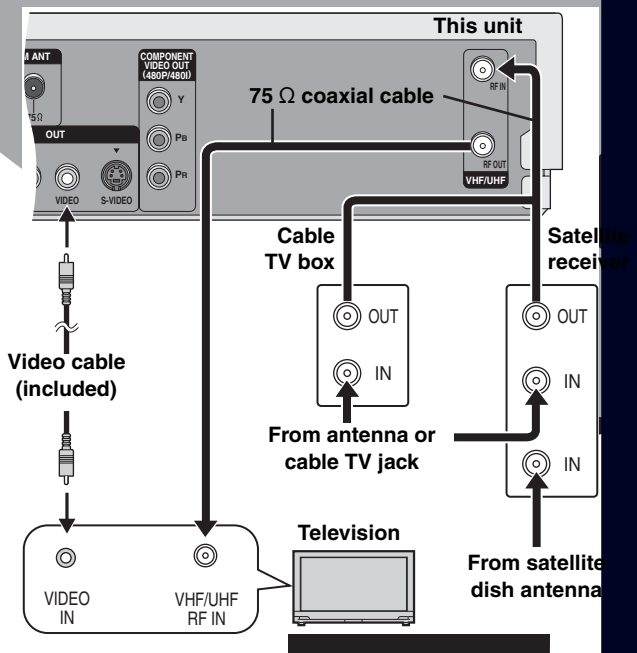
The clock starts.

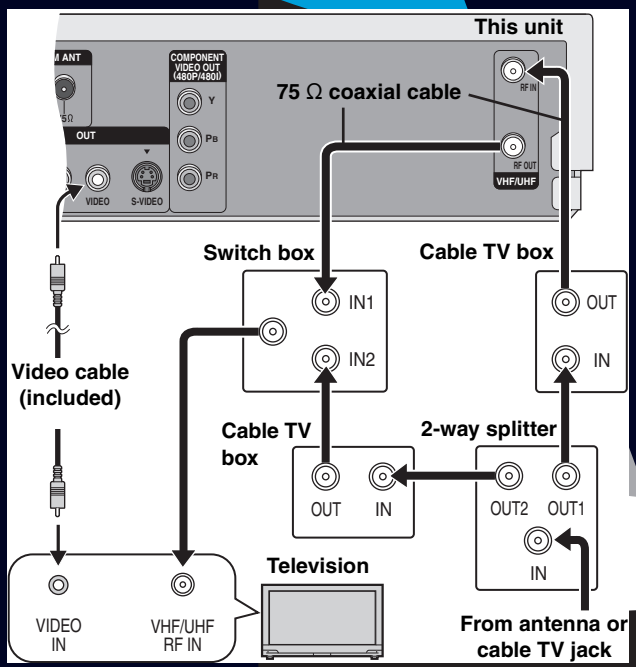
When you change the time zone, the recording times for programs recorded before the time zone was changed also change to correspond to the new time zone.

SETTINGS



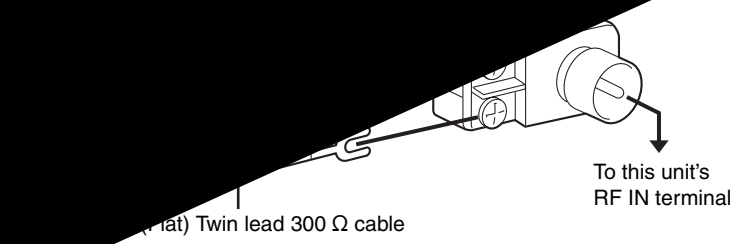
Connecting a cable TV box/satellite receiver



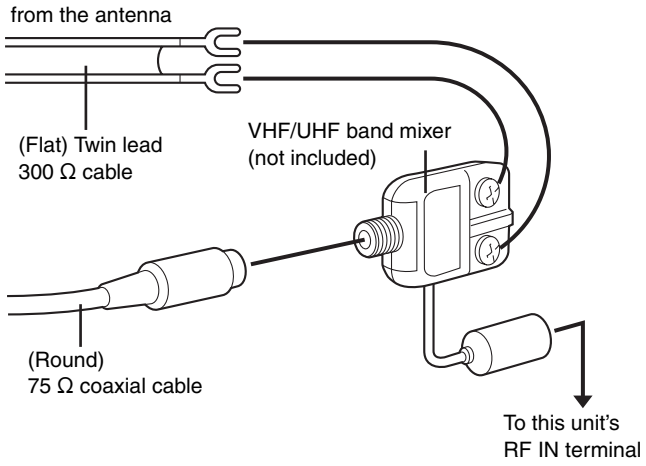


nections from the evision

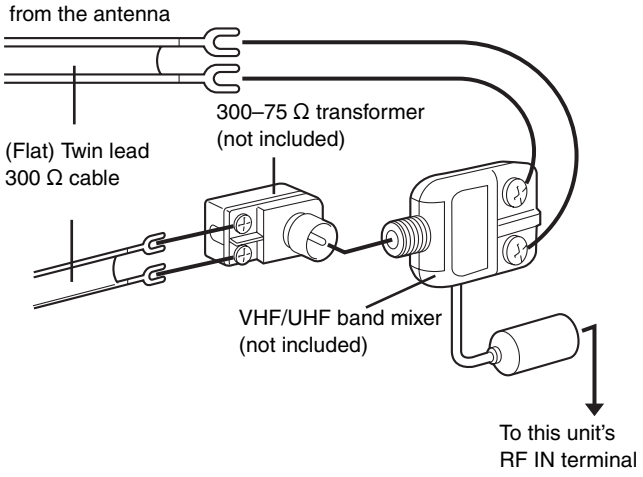
following connections to suit the antenna terminals levision. Refer to the television's operating instructions. Connect to one of the terminals, then change the television's setting as necessary.



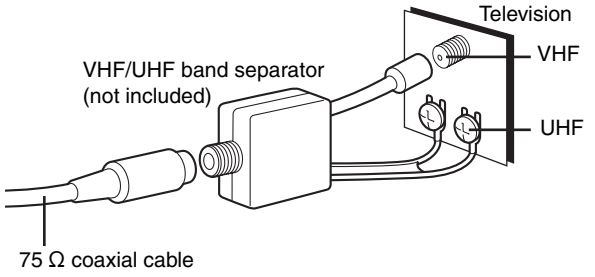
■ A twin lead and a coaxial cable



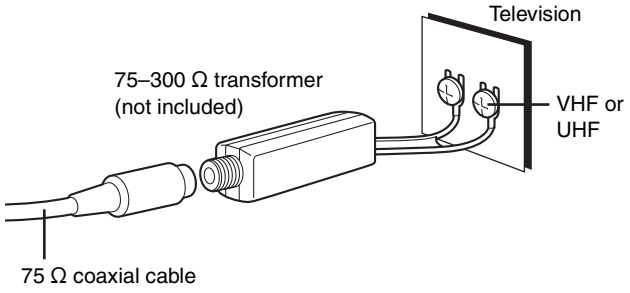
■ Two twin leads



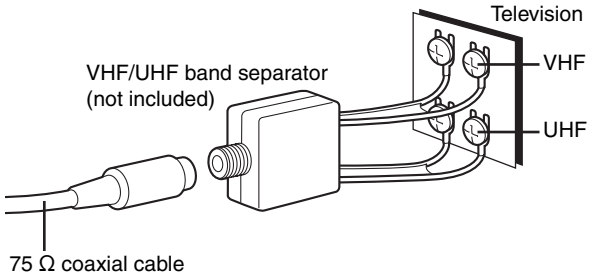
■ A twin lead and coaxial plug terminal



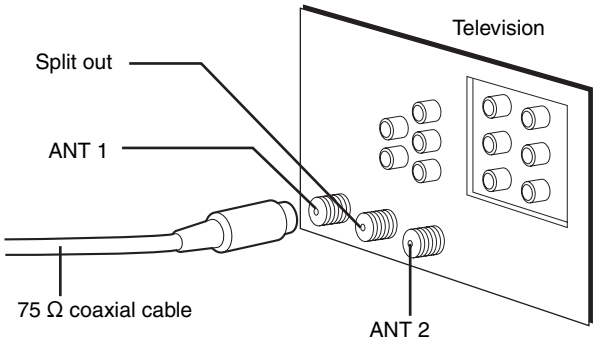
■ A twin lead terminal



■ Two twin lead terminals



■ Multiple antenna terminals



INFO

Error messages

On the television

		Page
Cannot finish recording completely.	●The program was copy-guarded.	—
	●No space left on the disc.	
	➡Create space by erasing any unwanted programs. [RAM]	**30**
	➡Use a new disc. [RAM] [DVD-R]	—
	●Recording was not completed for some other reason.	—
Cannot record on the disc.	●The disc is scratched. Use another disc.	
	●The disc is dirt—ot-.	

On the unit's display

Troubleshooting guide

Before requesting service, make the below checks. If you are in doubt about some of the check points, or if the remedies indicated in the chart do not solve the problem:
In the U.S.A., contact the Panasonic Customer Call Center

Recording and timer recording

		Page
Cannot record.	●You haven't inserted a disc or the disc you inserted cannot be recorded on. Insert a disc the unit can record onto. ●The disc is unformatted. Format the disc so this unit can record on it. [RAM] ●The write-protect tab on the cartridge is set to PROTECT. ●Some programs have limitations on the number of times they can be recorded (CPRM). ●The disc is protected with DISC SETTING. ●The disc is full or nearly full. Erase unneeded programs or use another disc. ●You cannot record on finalized DVD-R discs. ●Audio from FM/AM broadcasts and the L1 OPTICAL IN terminal cannot be recorded.	**8** **33** **8** **51** **32** **30** **—** **—**
VCR Plus+ programming does not work properly.	●The guide channels are incorrect. Go to the Channel menu and correct them with "VCR Plus+ CH Setting". ●The clock is wrong. Go to the Set Up menu and correct it with Clock settings.	**10** **43**
Timer recording does not work properly.	●The timer program is incorrect. Correct the program. ●The unit is not on timer recording standby. ("⏲" on the unit's display is not on.) Press [⏻ POWER] to turn the unit off and make sure that "⏲" is on. ●Different timer program times overlap. ●The clock is wrong. Go to the Set Up menu and correct it with Clock settings.	**16** **—** **—** **43**
The unit switches to standby while making a timer recording.	●The disc has run out of space. Use a disc that has enough space to record the program.	**—**
The timer program remains even after recording finishes.	●The timer program remains if set to daily or weekly.	**15**
Timer recording does not stop even when [■] is pressed.	●Press [■] and then [ENTER] within 5 seconds to turn "⏲" off. Recording stops.	**—**
The available recording time doesn't increase even after erasing recordings on the disc.	●As this unit is unable to erase data written to DVD-RAM with a computer, the available recording time does not increase. The data will be erased if you reformat the disc. ●If the disc is dirty, wipe with the DVD-RAM/PD disc cleaner (optional) before formatting. ●Available recording space on the DVD-R does not increase even after erasing previously recorded programming.	**33** **53** **—**
A part or whole of a recorded program has been lost.	●If there is a power failure or the plug is disconnected from the household AC outlet while recording or editing, the program may be lost or the disc may become unusable. ➡We cannot offer any guarantee regarding lost programs or discs. You will have to format the disc or use a new disc.	**—**

Play

Play fails to start even when [►] (PLAY) is pressed. **Play starts but then stops immediately.**	●Insert the disc correctly with the label facing up. ●This unit cannot play discs other than the ones listed in these operating instructions. ●The disc is dirty. Clean it. ●The disc may be badly scratched. ●You inserted a blank DVD-RAM or DVD-R. ●Condensation has formed: Wait 1 to 2 hours for it to evaporate.	**12** **8** **53** **—** **—** **—**
A title or chapter doesn't play when it is selected.	●Some titles and chapters on DVD-Video are not played when you have changed the ratings level.	**38**
Picture distorted during search.	●Some distortion is normal.	**—**
Alternative soundtrack and subtitles cannot be selected.	●The languages are not recorded on the disc. ●You may have to use the disc's menus to select languages.	**—** **19**
No subtitles.	●Subtitles are not recorded on the disc. ●Turn the subtitles on. ●Subtitles around markers may fail to appear.	**—** **22** **—**
Angle cannot be changed.	●This function depends on software availability. Angles can only be changed during scenes where different angles are recorded.	**—**
You have forgotten your ratings password.	●Return the ratings setting to "8". While the disc tray is open, press and hold [⏮/◄◄] and [►►/⏭] on the main unit at the same time for 5 or more seconds.	**—**

Displays

The display is dim.	●Go to the Display menu and change the display's brightness with "FL Display".	**39**
"12:00" is flashing on the unit's display.	●The clock is not set.	**43**
The displayed recording time and actual recording time differ.	●Displayed recording time is based on the number of frames per second. This number is subject to minute variations. When recording over long periods, these variations may result in the difference between displayed recording time and actual recording time. This is normal.	**—**
The display doesn't show the correct time. MP3	●Times may not appear correctly when searching through tracks recorded with a variable bit rate.	**—**

Radio and sound		Page
Cannot select the tuner	●Check and see if the subwoofer's AC power supply cord is connected.	**Setup Guide**
Noise is heard. **"ST" is flashing or doesn't light.** **Sound is distorted.**	●Adjust the position of the FM or AM antenna. ●Use an FM outdoor antenna.	**—** **35**
A beat sound is heard.	●Turn the television off or separate it from the unit.	**—**
A low hum is heard during AM broadcasts.	●Separate the antenna from other cables and cords.	**—**
The radio cannot be tuned in.	●Turn off nearby televisions, video cassette recorders, satellite receivers and computers.	**—**
All programmed radio presets are erased. **Returns to the original setting even after making changes to the sound field system settings.**	●Radio and sound field system settings are stored to memory after pressing [⏻ POWER]. Do not remove the AC power supply cords until "BYE" disappears from the unit's display.	**—**
No sound. **Low volume.** **Distorted sound.**	●Check the connections. ●Turn the volume up. ●Turn muting off. ●Switch off the unit, determine and correct the cause, then switch the unit on. Causes include: –Shorting (bare wires touching) of positive and negative speaker wires. –Using speakers with an impedance lower than that rated for this unit. –Straining of the speakers through excessive volume or power. –Using the unit in a hot environment without proper ventilation.	**Setup Guide** **—** **6** **—**
Humming heard during play.	●An AC power supply cord or fluorescent light is near the subwoofer. Keep other appliances and cords away from the subwoofer.	**—**
Cannot hear the desired audio type.	●Press [SHIFT]+[AUDIO] to select the desired audio type. ●You cannot change the DVD-Audio audio type if the software producer has restricted play in stereo.	**19** **—**
Cannot switch audio during stereo or SAP broadcasts.	●You cannot change the audio type when a DVD-R is in the disc tray. ●It is not possible to switch the audio when the recording mode is XP and "LPCM" has been selected in the SETUP menu, "Audio Mode for XP Recording". ➡Select "Main" or "SAP" from "Select MTS" in the Audio menu before recording.	**—** **39**
Beginning of audio is cut off when receiving audio from a digital broadcast using the optical connection.	●When using the "L1 AUTO" setting, sound may be cut off when the signal is being switched automatically between Dolby Digital and PCM. Set to "L1 PCM FIX" to avoid this.	**45**

Discs make sounds as they rotate. This does not indicate a malfunction.

Language code list Input the code with numbered buttons.

Abkhazian:	6566	Catalan:	6765	Gujarati:	7185	Lingala:	7678	Rhaeto-Romance:	8277	Tamil:	8465
Afar:	6565	Chinese:	9072	Hausa:	7265	Lithuanian:	7684	Romanian:	8279	Tatar:	8484
Afrikaans:	6570	Corsican:	6779	Hebrew:	7387	Macedonian:	7775	Russian:	8285	Telugu:	8469
Albanian:	8381	Croatian:	7282	Hindi:	7273	Malagasy:	7771	Samoan:	8377	Thai:	8472
Ameharic:	6577	Czech:	6783	Hungarian:	7285	Malay:	7783	Sanskrit:	8365	Tibetan:	6679
Arabic:	6582	Danish:	6865	Icelandic:	7383	Malayalam:	7776	Scots Gaelic:	7168	Tigrinya:	8473
Armenian:	7289	Dutch:	7876	Indonesian:	7378	Maltese:	7784	Serbian:	8382	Tonga:	8479
Assamese:	6583	English:	6978	Interlingua:	7365	Maori:	7773	Serbo-Croatian:	8372	Turkish:	8482
Aymara:	6588	Esperanto:	6979	Irish:	7165	Marathi:	7782	Shona:	8378	Turkmen:	8475
Azerbaijani:	6590	Estonian:	6984	Italian:	7384	Moldavian:	7779	Sindhi:	8368	Twi:	8487
Bashkir:	6665	Faroese:	7079	Japanese:	7465	Mongolian:	7778	Singhalese:	8373	Ukrainian:	8575
Basque:	6985	Fiji:	7074	Javanese:	7487	Nauru:	7865	Slovak:	8375	Urdu:	8582
Bengali; Bangla:	6678	Finnish:	7073	Kannada:	7578	Nepali:	7869	Slovenian:	8376	Uzbek:	8590
Bhutani:	6890	French:	7082	Kashmiri:	7583	Norwegian:	7879	Somali:	8379	Vietnamese:	8673
Bihari:	6672	Frisian:	7089	Kazakh:	7575	Oriya:	7982	Spanish:	6983	Volapük:	8679
Breton:	6682	Galician:	7176	Kirghiz:	7589	Pashto, Pushto:	8083	Sundanese:	8385	Welsh:	6789
Bulgarian:	6671	Georgian:	7565	Korean:	7579	Persian:	7065	Swahili:	8387	Wolof:	8779
Burmese:	7789	German:	6869	Kurdish:	7585	Polish:	8076	Swedish:	8386	Xhosa:	8872
Byelorussian:	6669	Greek:	6976	Laotian:	7679	Portuguese:	8084	Tagalog:	8476	Yiddish:	7473
Cambodian:	7577	Greenlandic:	7576	Latin:	7665	Punjabi:	8065	Tajik:	8471	Yoruba:	8979
		Guarani:	7178	Latvian, Lettish:	7686	Quechua:	8185			Zulu:	9085

CPRM (Content Protection for Recordable Media)
CPRM is the copyright protection technology that is used to protect broadcasts that are allowed to be recorded only once (e.g. some CATV broadcasts).

Decoder
A decoder restores the coded audio signals on DVDs to normal.

Dolby Digital
This is a method of coding digital signals developed by Dolby Laboratories. Apart from stereo (2-channel) audio, these signals can also be multi-channel audio. A large amount of audio information can be recorded on one disc using this method.
This unit is set to record using Dolby Digital in all recording modes.

Dolby Pro Logic II
Dolby Pro Logic II is an advanced decoder that derives 5 channel surround (Left, Center, Right, Left and Right Surround) from any stereo program material, whether or not it has been specifically Dolby Surround encoded. Pro Logic II provides two full-range surround channels, as opposed to Pro Logic's single surround channel.

DTS (Digital Theater Systems)
This surround system is used in many movie theaters around the world. There is good separation between the channels, so realistic sound effects are possible.

Film and video
DVD-Videos are recorded using either film or video. Usually, film is recorded at 24 frames per second, the rate movies are filmed at, while video is recorded at 30 frames per second.

Frame still and field still
Frames are the still pictures that make moving pictures. About thirty are shown each second. A frame still may appear blurred but overall quality is high.
Two fields appear alternately to make up one frame. A field still is not blurred but picture quality is lower.

Interlace and progressive output
NTSC, the video signal standard, has 480 interlaced (I) scan lines, whereas progressive scanning uses twice the number of scan lines. This is called 480P.

I/P/B
MPEG 2, the video compression standard adopted for use with DVD-Video, codes frames using these 3 picture types.
I: Intra coded picture
This picture has the best quality and is the best to use when adjusting the picture.
P: Predictive coded picture
This picture is calculated based on past I- or P-pictures.
B: Bidirectionally-predictive coded picture
This picture is calculated by comparing past and future I- and P-pictures so it has the lowest volume of information.

Linear PCM (pulse code modulation)
These are uncompressed digital signals, similar to those found on CDs. LPCM sound is available when recording in XP mode.

Playback control (PBC)
If a Video CD has playback control, you can select scenes and information with menus.

Pan&Scan/Letterbox
In general, DVD-Video are produced with the intention that they be viewed on a widescreen television with an aspect ratio of 16:9. This means you can view most material with the intended aspect ratio on a widescreen television.
Material with this ratio will not fit onto a standard television with an aspect ratio of 4:3. Two styles of picture, "Pan&Scan" and "Letterbox", deal with this problem.

Pan&Scan: The sides are cut off so the picture fills the screen.

Letterbox: Black bands appear at the top and bottom of the picture so the picture itself appears in an aspect ratio of 16:9.

Listening caution

ting fine audio equipment such as the unit you've just purchased is only the start of your musical enjoyment. Now it's time to sider how you can maximize the fun and excitement your equipment offers. This manufacturer and the Electronic Industries Association's nsumer Electronics Group want you to get the most out of your equipment by playing it at a safe level. One that lets the sound come hrough loud and clear without annoying blaring or distortion—and, most importantly, without affecting your sensitive hearing.

We recommend that you avoid prolonged exposure to excessive noise.

Sound can be deceiving. Over time your hearing "comfort level" adapts to higher volumes of sound. So what sounds "normal" can actually be loud and harmful to your hearing.
Guard against this by setting your equipment at a safe level BEFORE your hearing adapts.
To establish a safe level:
- Start your volume control at a low setting.
- Slowly increase the sound until you can hear it comfortably and clearly, and without distortion.

Once you have established a comfortable sound level:
- Set the dial and leave it there.

Taking a minute to do this now will help to prevent hearing damage or loss in the future. After all, we want you listening for a lifetime.

Specifications

■ AMPLIFIER SECTION

RMS total power output 700 W
1 kHz, 10 % total harmonic distortion
Front: 60 W per channel (6 Ω)
Center: 220 W (6 Ω)
Surround: 60 W per channel (6 Ω)
100 Hz, 10 % total harmonic distortion
Subwoofer: 240 W (4 Ω)

FTC total power output 430 W
120 Hz–20 kHz, 1.0 % total harmonic distortion
Front: 35 W per channel (6 Ω)
Center: 140 W (6 Ω)
Surround: 35 W per channel (6 Ω)
45 Hz–120 Hz, 1.0 % total harmonic distortion
Subwoofer: 150 W (4 Ω)

Input sensitivity/Input impedance
L1/L2/L3: 350 mV, 47 kΩ
Digital input Optical input (Dolby Digital, Linear PCM)

■ TV TUNER SECTION

Antenna reception input: TV Channel: 2 ch–69 ch, 75 Ω
CATV Channel: 1 ch–125 ch, 75 Ω

■ FM TUNER SECTION

Frequency range: 87.9–107.9 MHz (200-kHz step)
87.5–108.0 MHz (100-kHz step)
Antenna terminals: 75 Ω unbalanced

■ AM TUNER SECTION

Frequency range: 520–1710 kHz (10-kHz step)

■ DISC SECTION

Recording system: DVD video recording standards (DVD-RAM)
DVD video standards (DVD-R)
LASER Specification
Class 1 LASER Product
Pick up: System with 1 lens, 2 integration units
Wavelength: 790 nm for CD/VCD, 662 nm for DVD
Recordable discs: 12 cm (5″) 4.7 GB/9.4 GB DVD-RAM discs
8 cm (3″) 2.8 GB DVD-RAM discs
12 cm (5″) 4.7 GB DVD-R discs (for General Ver. 2.0)
8 cm (3″) 1.4 GB DVD-R discs (for General Ver. 2.0)
Recording time: XP: 60 minutes
SP: 120 minutes
LP: 240 minutes
EP: 360 minutes
Playable discs: 12 cm (5″) 4.7 GB/9.4 GB DVD-RAM discs
8 cm (3″) 2.8 GB DVD-RAM discs
12 cm (5″) 4.7 GB DVD-R discs (for General Ver. 2.0)
8 cm (3″) 1.4 GB DVD-R discs (for General Ver. 2.0)
DVD-AUDIO/VIDEO discs
CD-Audio discs (CD-DA)
Video CD discs
CD-R/CD-RW discs
[CD-DA, Video CD (Ver. 2.0), MP3 formatted discs]

Video system
TV system: NTSC system, 525 lines, 60 fields
Recording system: MPEG2 (Hybrid VBR)
Output terminal: RCA (composite video)
S terminal (Y, C)
RCA (component video 480P/480i)

Audio system
Recording system: Dolby Digital (XP/SP/LP/EP)
Linear PCM (XP only)
Number of channels: Recording: 2 channels
Playback: 5.1 channels
(FL, FR, Center, SL, SR, Subwoofer)

■ SPEAKER SECTION

●Front speakers SB-PF1000
Type: 2 way, 2 speaker system, Bass-ref.
Woofer: 6.5 cm ($2^{1}/_{2}$″) CONE type
Tweeter: 6 cm ($2^{3}/_{8}$″) RING SHAPED DOME type
Impedance/Input power (IEC): 6 Ω/60 W (Max)
Output sound pressure level: 82 dB/W (1.0 m)
Frequency range: 90 Hz–50 kHz (−16 dB)
100 Hz–45 kHz (−10 dB)
Dimensions (W×H×D): 240×1138 (Max)/678 (Min)×240 mm
[$9^{7}/_{16}$″×$44^{13}/_{16}$″ (Max)/$26^{11}/_{16}$″ (Min)×$9^{7}/_{16}$″]
Speaker height adjustment range: 1138–968 mm ($44^{13}/_{16}$″–$38^{1}/_{8}$″),
796–625 mm ($31^{11}/_{32}$″–$24^{19}/_{32}$″)
[However, the height of the stand is fixed at 678 mm ($26^{11}/_{16}$″).]
Mass: Approx. 3.7 kg (8.2 lb.)

●Center speaker SB-PC1000
Type: 2 way, 3 speaker system, Bass-ref.
Woofer: 6.5 cm ($2^{1}/_{2}$″) CONE type×2
Tweeter: 6 cm ($2^{3}/_{8}$″) RING SHAPED DOME type
Impedance/Input power (IEC): 6 Ω/220 W (Max)※
Output sound pressure level: 84 dB/W (1.0 m)
Frequency range: 100 Hz–50 kHz (−16 dB)
120 Hz–45 kHz (−10 dB)
Dimensions (W×H×D): 320×97×93 mm ($12^{19}/_{32}$″×$3^{13}/_{16}$″×$3^{21}/_{32}$″)
Mass: Approx. 1.5 k**g** (3.3 lb.)
※ Ratings with the low cut filter equipped amplifier.

●Surround speakers SB-PS1000
Type: 2 way, 2 speaker system, Bass-ref.
Woofer: 6.5 cm ($2^{1}/_{2}$″) CONE type
Tweeter: 6 cm ($2^{3}/_{8}$″) RING SHAPED DOME type
Impedance/Input power (IEC): 6 Ω/60 W (Max)
Output sound pressure level: 80 dB/W (1.0 m)
Frequency range: 95 Hz–50 kHz (−16 dB)
110 Hz–45 kHz (−10 dB)
Dimensions (W×H×D): 160×224×107 mm ($6^{5}/_{16}$″×$8^{13}/_{16}$″×$4^{7}/_{32}$″)
Mass: Approx. 1.5 k**g** (3.3 lb.)

●Subwoofer SB-WA351
Type: 1 way, 1 speaker system, Bass-ref.
Superwoofer: 17 cm ($6^{3}/_{4}$″) CONE type
Impedance 4 Ω
Output sound pressure level: 80 dB/W (1.0 m)
Frequency range: 40 Hz–220 Hz (−16 dB)
45 Hz–180 Hz (−10 dB)
Dimensions (W×H×D): 160×450×424 mm
($6^{5}/_{16}$″×$17^{23}/_{32}$″×$16^{11}/_{16}$″)
Mass: Approx. 12 k**g** (26.5 lb.)

■ GENERAL

Power supply: AC 120 V, 60 Hz
Power consumption: Main unit SA-HT1000: 30 W
Subwoofer SB-WA351: 290 W
Dimensions (W×H×D) (Main unit SA-HT1000)**:**
430×82×381 mm ($16^{15}/_{16}$″×$3^{1}/_{4}$″×15″)
Mass (Main unit SA-HT1000)**:** Approx. 5.0 kg (11.0 lbs)
(Dimensions and Mass do not include the speakers.)
Operating temperature range: 5 °C–40 °C (41 °F–104 °F)
Operating humidity range: 10 %–80 % RH (no condensation)

Power consumption in standby mode:
Main unit SA-HT1000: Approx. 4.0 W
(When FL display is off: Approx. 0.5 W)
Subwoofer SB-WA351: Approx. 0.7 W

[Note]
Specifications are subject to change without notice.
Mass and dimensions are approximate.

Limited Warranty (ONLY FOR U.S.A.)

Panasonic Consumer Electronics Company,
Division of Matsushita Electric Corporation of America
One Panasonic Way Secaucus, New Jersey 07094

Panasonic Sales Company, Division of Matsushita Electric of Puerto Rico, Inc.,
Ave. 65 de Infantería, Km. 9.5
San Gabriel Industrial Park, Carolina, Puerto Rico 00985

Panasonic/Technics Audio Products Limited Warranty

Limited Warranty Coverage
If your product does not work properly because of a defect in materials or workmanship, Panasonic Consumer Electronics Company or Panasonic Sales Company (collectively referred to as "the warrantor") will, for the length of the period indicated on the chart below, which starts with the date of original purchase ("warranty period"), at its option either (a) repair your product with new or refurbished parts, or (b) replace it with a new or a refurbished product. The decision to repair or replace will be made by the warrantor.

Product or Part Name	Parts	Labor
Audio Products (except items listed below)	One (1) year	One (1) year
All Audio Racks (cabinets)	Thirty (30) days	Not Applicable
Technics Stand Alone Speakers, Subwoofer Speakers	Three (3) years	Three (3) years
USB Reader-Writer, Personal Computer Card Adapters (in exchange for defective item)	One (1) year	Not Applicable
Accessories: Headphones, Cartridges, Microphones, Adapters	Ninety (90) days	Ninety (90) days
Rechargeable Batteries, DVD-R/-RAM Discs (in exchange for defective item)	Ten (10) days	Not Applicable
SD Memory Cards, Rechargeable Battery Packs (in exchange for defective item)	Ninety (90) days	Not Applicable

During the "Labor" warranty period there will be no charge for labor. During the "Parts" warranty period, there will be no charge for parts. You must carry-in or mail-in your product during the warranty period. If non-rechargeable batteries are included, they are not warranted. This warranty only applies to products purchased and serviced in the United States or Puerto Rico. This warranty is extended only to the original purchaser of a new product which was not sold "as is". A purchase receipt or other proof of the original purchase date is required for warranty service.

Carry-In or Mail-In Service
For Carry-In or Mail-In Service in the United States call 1-800-211-PANA (1-800-211-7262) or visit Panasonic web site: http://www.panasonic.com
For assistance in Puerto Rico call Panasonic Sales Company (787)-750-4300 or fax (787)-768-2910.

Limited Warranty Limits And Exclusions
This warranty ONLY COVERS failures due to defects in materials or workmanship, and DOES NOT COVER normal wear and tear or cosmetic damage. The warranty ALSO DOES NOT COVER damages which occurred in shipment, or failures which are caused by products not supplied by the warrantor, or failures which result from accidents, misuse, abuse, neglect, mishandling, misapplication, alteration, faulty installation, set-up adjustments, misadjustment of consumer controls, improper maintenance, power line surge, lightning damage, modification, or commercial use (such as in a hotel, office, restaurant, or other business), rental use of the product, service by anyone other than a Factory Servicenter or other Authorized Servicer, or damage that is attributable to acts of God.

THERE ARE NO EXPRESS WARRANTIES EXCEPT AS LISTED UNDER "LIMITED WARRANTY COVERAGE". THE WARRANTOR IS NOT LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM THE USE OF THIS PRODUCT, OR ARISING OUT OF ANY BREACH OF THIS WARRANTY. (As examples, this excludes damages for lost time, travel to and from the servicer, loss of media or images, data or other memory content. The items listed are not exclusive, but are for illustration only.) **ALL EXPRESS AND IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY, ARE LIMITED TO THE PERIOD OF THE LIMITED WARRANTY.**

Some states do not allow the exclusion or limitation of incidental or consequential damages, or limitations on how long an implied warranty lasts, so the exclusions may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state. If a problem with this product develops during or after the warranty period, you may contact your dealer or Servicenter. If the problem is not handled to your satisfaction, then write to the warrantor's Consumer Affairs Department at the addresses listed for the warrantor.

PARTS AND SERVICE WHICH ARE NOT COVERED BY THIS LIMITED WARRANTY ARE YOUR RESPONSIBILITY.

Customer Services Directory

For Product Information, Operating Assistance, Literature Request, Dealer Locations, and Customer Service inquiries please visit Web Site:
http://www.panasonic.com
You can purchase parts, accessories, locate your nearest servicenter and more by visiting our Web Site
or E-mail us via web:
http://www.panasonic.com/consumer_electronics/support/customerfeedback.asp
Contact:
1-800-211-PANA (7262),
Monday–Friday 9 am–9 pm; Saturday–Sunday 10 am–7 pm, EST.

For hearing or speech impaired TTY users, TTY: 1-877-833-8855

Accessory Purchases

1-800-332-5368 (Customer Orders Only)
1-800-237-9080 (Fax Only)
(Monday–Friday 9 am to 8 pm, EST.) Panasonic Services Company
20421 84th Avenue South, Kent, WA 98032
(Accepts Visa, MasterCard, Discover Card, American Express, and Personal Check)

For hearing or speech impaired TTY users, TTY: 1-866-605-1277

Service in Puerto Rico
Matsushita Electric of Puerto Rico, Inc. Panasonic Sales Company/Factory Servicenter:
Ave. 65 de Infanteria, Km. 9.5, San Gabriel Industrial Park, Carolina, Puerto Rico 00985
Phone (787) 750-4300 Fax (787) 768-2910

Limited Warranty (ONLY FOR CANADA)

Panasonic Canada Inc.
5770 Ambler Drive, Mississauga, Ontario L4W 2T3

PANASONIC/TECHNICS PRODUCT—LIMITED WARRANTY

Panasonic Canada Inc. warrants this product to be free from defects in material and workmanship and agrees to remedy any such defect for a period as stated below from the date of original purchase.

Panasonic Home Theater System with DVD Recorder One (1) year, parts and labour

LIMITATIONS AND EXCLUSIONS

This warranty does not apply to products purchased outside Canada or to any product which has been improperly installed, subjected to usage for which the product was not designed, misused or abused, damaged during shipping, or which has been altered or repaired in any way that affects the reliability or detracts from the performance, nor does it cover any product which is used commercially. Dry cell batteries are also excluded from coverage under this warranty.

This warranty is extended to the original end user purchaser only. A purchase receipt or other proof of date of original purchase is required before warranty service is performed.

THIS EXPRESS, LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, EXCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE.

IN NO EVENT WILL PANASONIC CANADA INC. BE LIABLE FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES.

In certain instances, some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, or the exclusion of implied warranties, so the above limitations and exclusions may not be applicable.

WARRANTY SERVICE

For product operation and information assistance, please contact your Dealer or our Customer Care Centre at: Telephone #: (905) 624-5505 Fax #: (905) 238-2360 Web: www.panasonic.ca

For product repairs, please contact one of the following:

- Your Dealer who will inform you of an authorized Servicentre nearest you.
- Our Customer Care Centre at (905) 624-5505 or www.panasonic.ca
- A Panasonic Factory Servicentre listed below:

Richmond, British Columbia	Calgary, Alberta	Mississauga, Ontario	Lachine, Québec
Panasonic Canada Inc.	Panasonic Canada Inc.	Panasonic Canada Inc.	Panasonic Canada Inc.
12111 Riverside Way	6835-8th St. N. E.	5770 Ambler Dr.	3075, rue Louis A. Amos
Richmond, BC	Calgary, AB	Mississauga, ON	Lachine, QC
V6W 1K8	T2E 7H7	L4W 2T3	H8T 1C4
Tel: (604) 278-4211	Tel: (403) 295-3955	Tel: (905) 624-8447	Tel: (514) 633-8684
Fax: (604) 278-5627	Fax: (403) 274-5493	Fax: (905) 238-2418	Fax: (514) 633-8020

IF YOU SHIP THE PRODUCT TO A SERVICENTRE

Carefully pack and send prepaid, adequately insured and preferably in the original carton.
Include details of the defect claimed, and proof of date of original purchase.

Angle 22
Antenna system 40
Audio 13, 19
Audio attribute 22

Center Focus 36
Channel Caption 41
Channel Setting
Auto Channel Setting 40
Plug-in Auto Tuning 9
ng Play 17
g
. 53
. 53
. 53
Clo 43
CM S 20
Connec
Audio 45
Cable TV lite receiver 44
Optical co 45
Video equip 44
CPRM 8, 51

Dialog Enhancer 22
Digital audio reception 45
Direct Navigator 19
Divide Program 31
Dolby Digital 36, 51
Dolby Pro Logic II 51
DTS 51
Dynamic range compression . . . . .

Edit Scenes . . . . .
Enter title . . . . .
Disc 32
Play list 28
Program 30
Erase 18
All programs 32
Play list 28
Play list scene 29
Program 30

Finalize 33
Flexible Recording (FR) 12, 13
Format 33
FUNCTIONS window 25

Headphones 7

Language code list 50
LPCM 12, 51

Marker 18, 23
MP3 21
MPEG-DNR 23
Multi Rear Surround 37
Muting 6

On-screen display 24
On-screen menu 22

Picture 23
Play list 27–29
Position Memory 19
Progressive 11, 23, 51
Properties
Play list 28
Program 30
Protection
Cartridge 8
Disc 32
Program 30

Quick View 20

Radio 34
FM frequency step 34
Optional FM antenna connection 35
tings 38
ording mode 12
itialize Setting 38
control code 42
Re lay 23
Resu ay function 18

Seat position 37
SETUP menu 38–43
Shorten Segment 31
Simultaneous rec and play 17
Sound Field Control 36
Sound track 22
Speaker delay time 42
Speaker level adjustment 37
Subtitle 22
Subwoofer level 37

Television operation 11
Time Slip 17, 20
Timer recording 14–16
Transfer 23
TV Type 11

VCR Plus+
Guide channel setting 10
Recording 14
Virtual Rear Surround 37

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